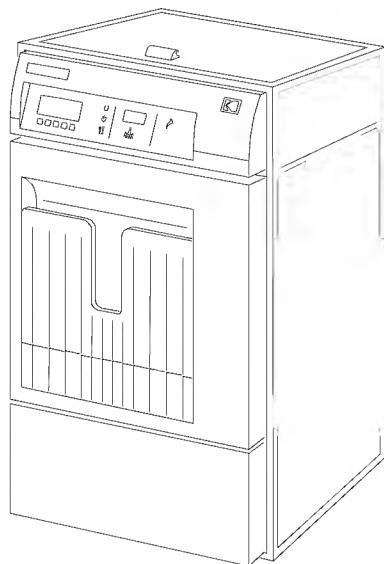




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**SERVICE MANUAL**  
for the  
***Kodak X-Omat 480 RA Processor***



H108\_0318BA

**PLEASE NOTE**

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**CAUTION**



This equipment includes parts and assemblies sensitive to damage from electrostatic discharge. Use caution to prevent damage during all service procedures.

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## SECTION 1

### Introduction

#### Required Tools

TOOL NUMBER	DESCRIPTION
TL-1194	Holder
TL-1434	Level - approximately 30 cm (12 in.)
TL-1611	Screwdriver - Offset
TL-1926	Magnetic Power Warning Sign
TL-2170	Clamp
TL-2431	Air Meter
TL-3346	Grounding Kit
TL-4391	Cable, used between Portable Computer and Processor
TL-4404	Diagnostic Diskette only
TL-4440	Diagnostic Diskette, includes Diagnostic Manual
TL-4430	Surface Mount Socket Chip Removal Tool

## Electrostatic Discharge

ESD--electrostatic discharge--is a primary source of:

- product downtime,
- lost productivity,
- costly repairs.

While we cannot even feel a static charge of less than 3,500 volts, as few as 30 volts can damage or destroy essential components in the electronic equipment upon which we rely.

As technology continues to advance, these advanced components will be even more vulnerable to ESD destruction.

The conclusion is clear. To take charge of productivity and profitability, we must reduce ESD.

Effective ESD control requires the following things.

### Awareness

*Everyone* in your organization needs to be aware of ESD, because partial ESD control is no ESD control at all. Everyone needs to remember that--

- ESD is a primary source of frustrating equipment failures and intermittent malfunctions.
- ESD affects productivity *and* profitability.
- ESD can be controlled.

### Action

To eliminate ESD, you must take action. And that means *everyone*--from senior management to the evening security crew.

- When repairing or maintaining electronic equipment, work at ESD-protected sites and always wear grounding straps.
- Keep static generators like plastic trash bags away from sensitive electronic components.
- See the following paragraphs for special tips on how to control ESD.

## Every Day

- [1] **Do not** store trash near static-sensitive equipment.
- [2] **Do not** place plastic materials near electronic components. Trash can liners and plastic foam cups generate static electricity that damages or destroys electronic components.
- [3] **Look for the label.** Static-sensitive components are marked with bright graphic labels. Follow label directions.
- [4] **Spray the carpet.** Walking over a carpet is a major cause of ESD. In low-humidity environments, periodically spray carpets with an anti-static preparation, available at local stores.

## During Maintenance and Repair

- [5] **Wear a grounding strap** when handling static-sensitive components. Always make certain that the clip is attached to a correctly grounded, unpainted surface.
- [6] **Use a portable grounding mat** if you cannot repair components at an ESD-protected workstation. (Kodak's Customer Equipment Services Division can assist you in setting up ESD-protected workstations.)
- [7] **Use protective packaging** when transporting components from one area to another. Transparent antistatic bags, available from a variety of manufacturers, shield components from damage.

## Overview of Processor

Many of the following procedures require that the processor be deenergized before the procedure is begun. Many of the procedures also require that the TOP COVER and 6 ACCESS PANELS be removed from the processor before the procedure is begun. For your convenience, illustrations showing the location of the TOP COVER, ACCESS PANELS, MAIN CIRCUIT BREAKER, RACKS, CROSSOVERS, and other major components appear on the following pages.

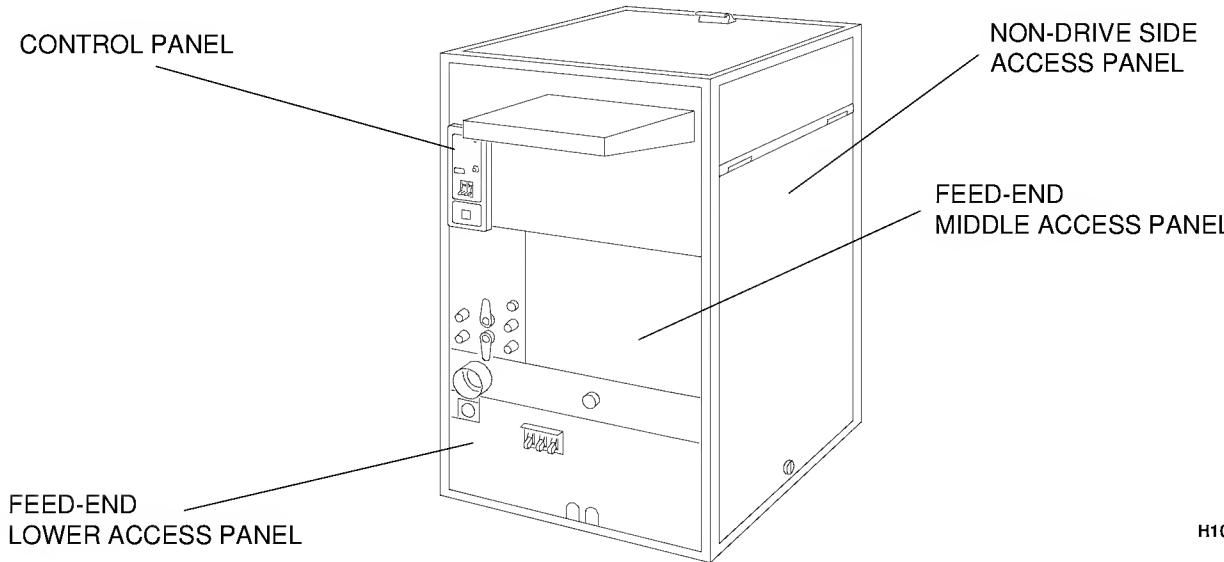


Figure 1-1 Feed-End View of Processor

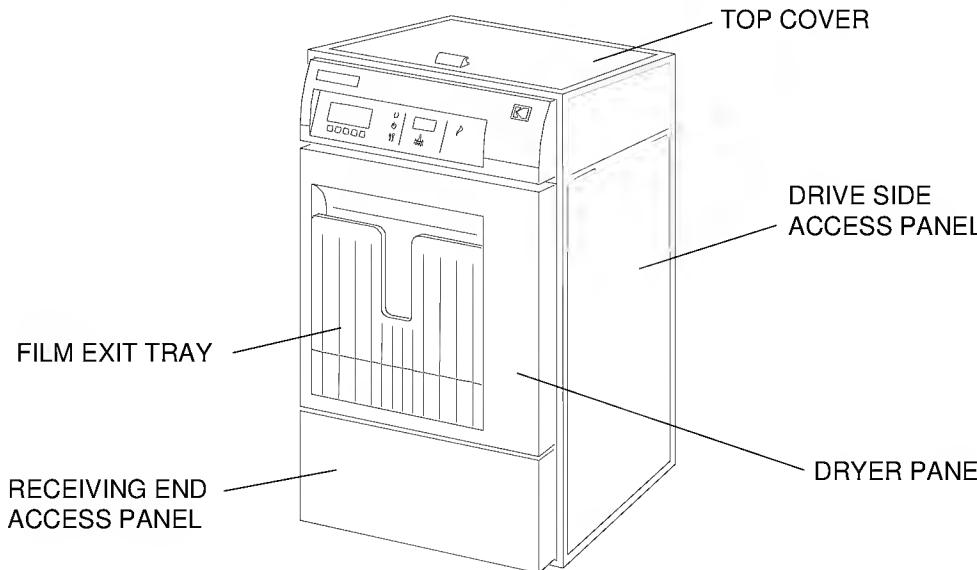
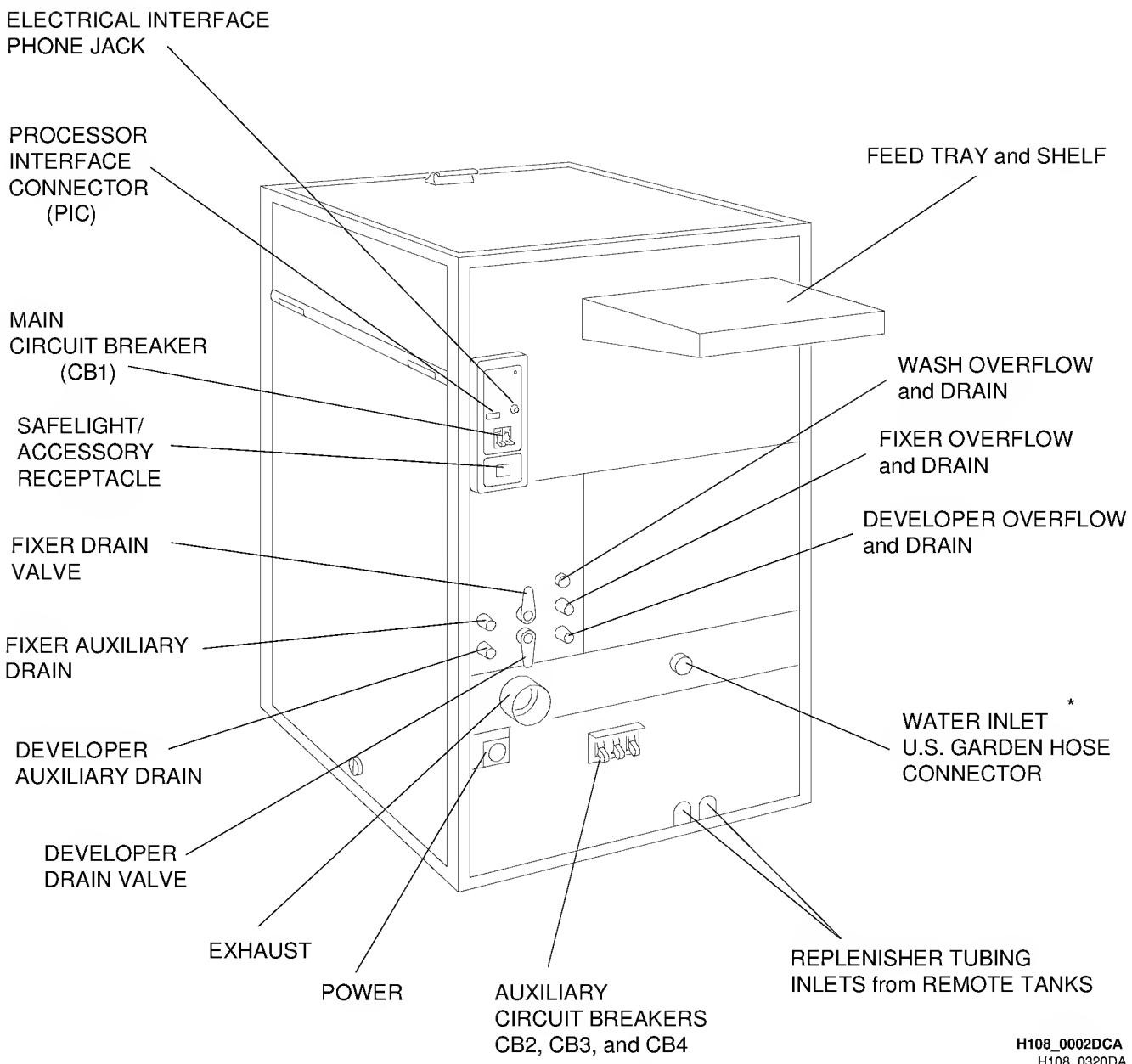


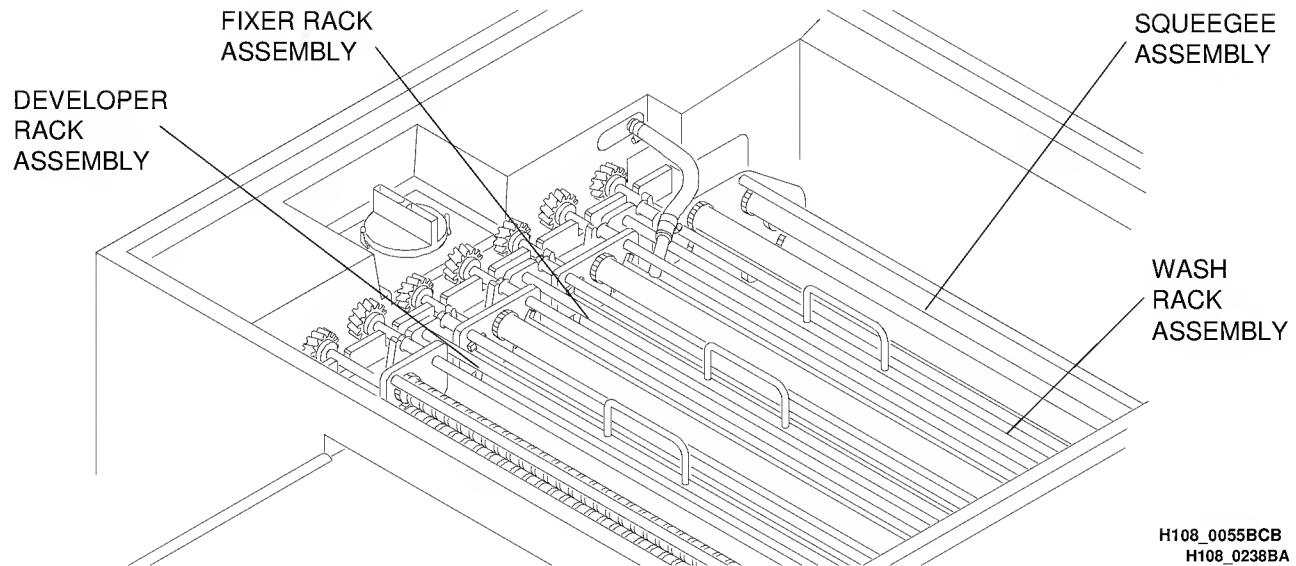
Figure 1-2 Receiving-End View of Processor



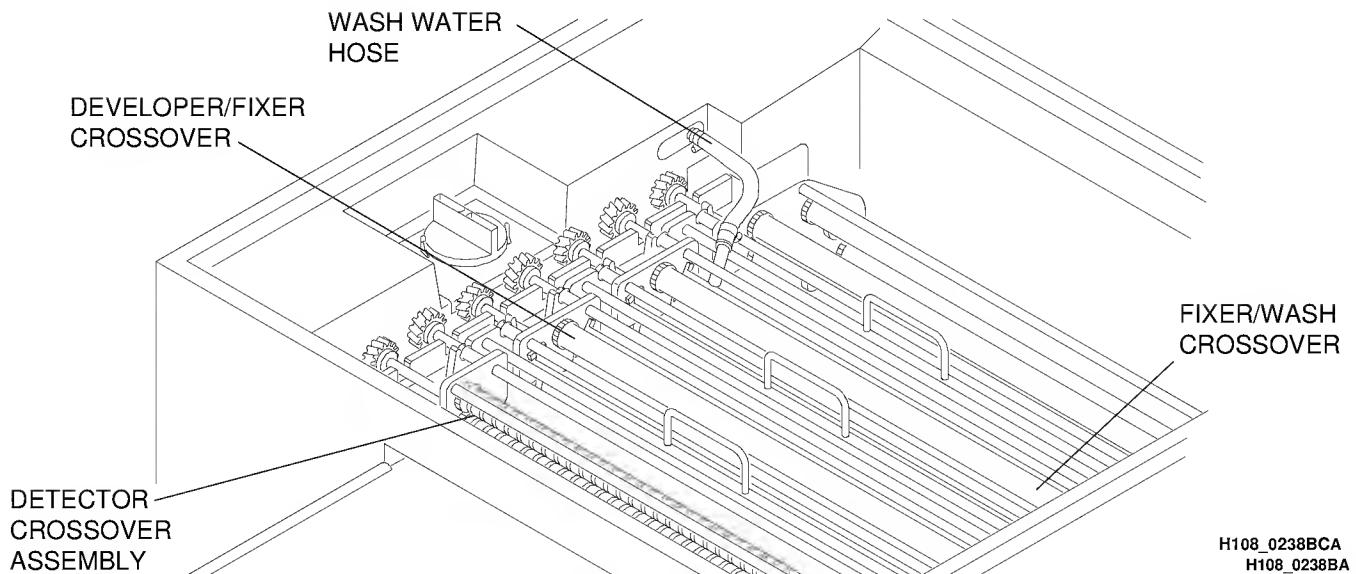
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Figure 1-3 Major Components of Processor

\* Supplied in the pre-pack is an adapter for  $\frac{1}{2}$  inch NPT.



**Figure 1-4 Rack Identification**



**Figure 1-5 Crossover Identification**

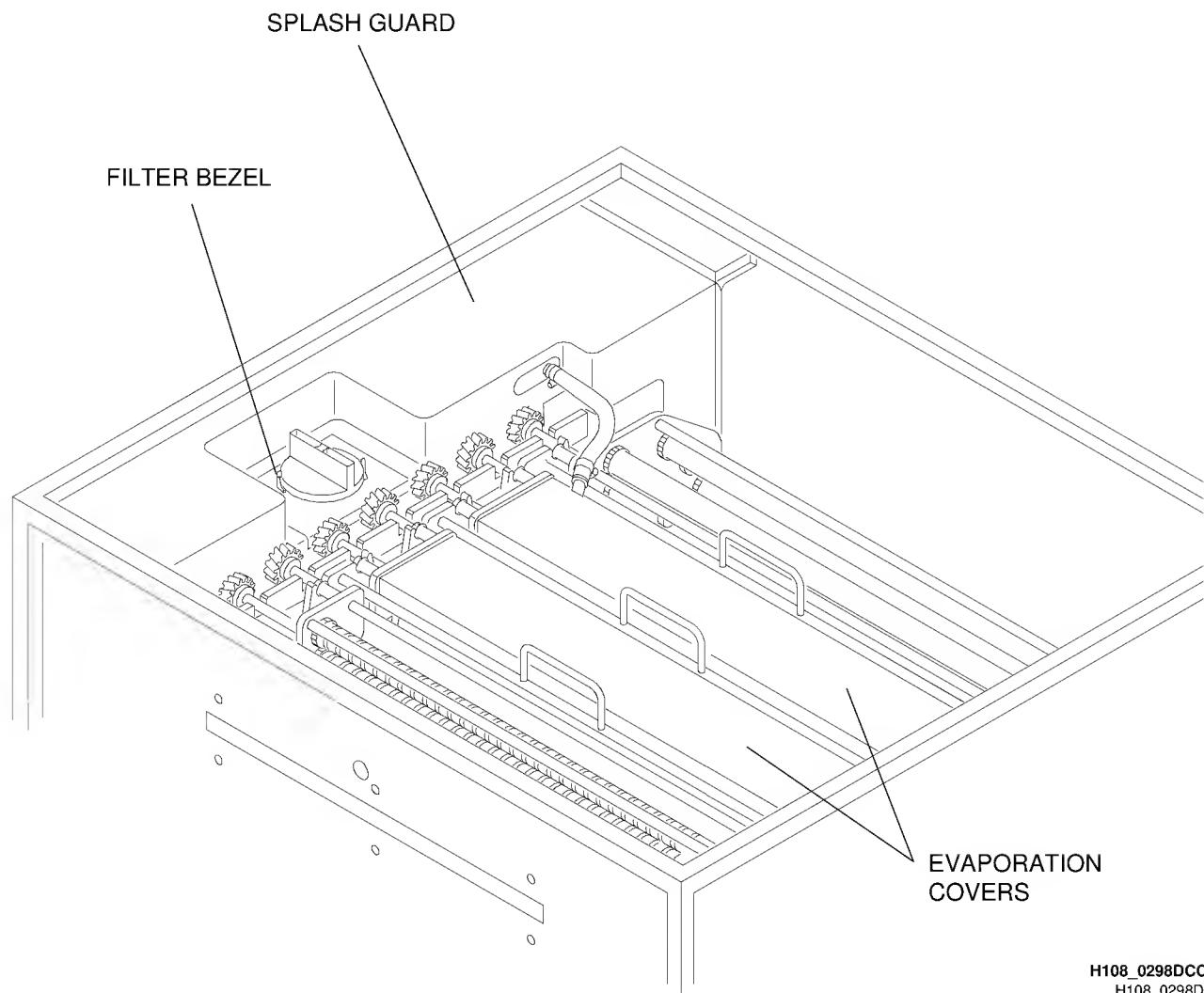


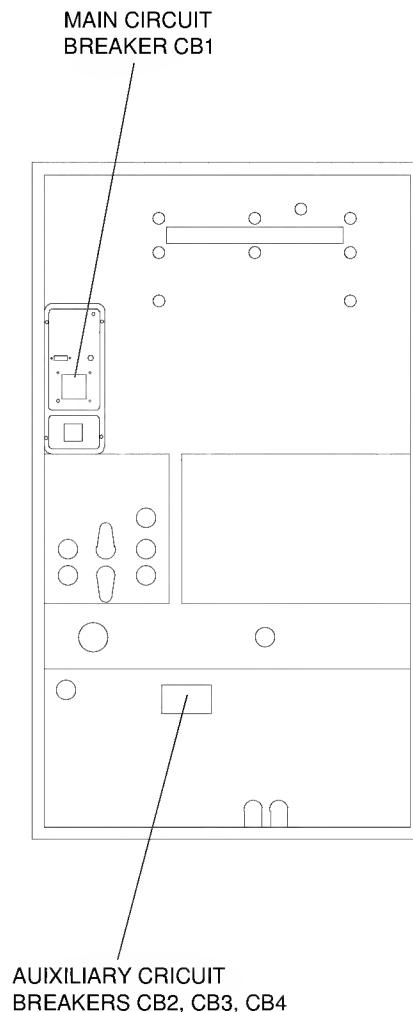
Figure 1-6 Top View of Processor

## Energizing the Processor

- [1] Move the wall power switch to the "ON" position.
- [2] Move the AUXILIARY CIRCUIT BREAKERS, CB2, CB3, and CB4 to the "I" position.
- [3] Move the MAIN CIRCUIT BREAKER, CB1, to the "I" position.

## Deenergizing the Processor

- [1] Move the MAIN CIRCUIT BREAKER, CB1, to the "O" position.
- [2] Move the wall power switch to the "OFF" position.
- [3] Attach the MAGNETIC POWER WARNING SIGN, TL-1926, to the wall power switch indicating that the processor is being serviced.



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**Figure 1-7 Feed-End of Processor**

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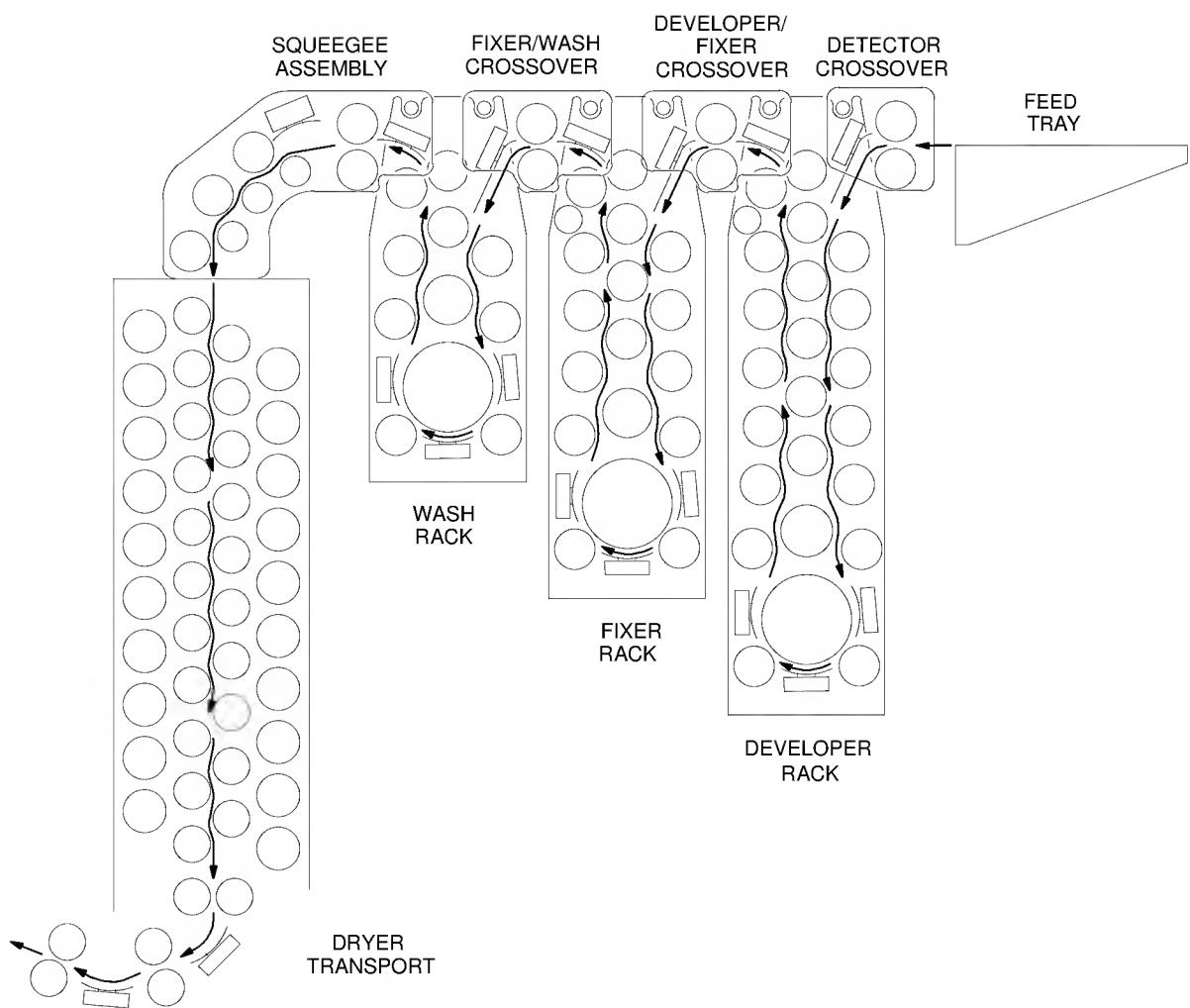
## **SECTION 2**

### **Racks**

#### **IMPORTANT**

All the procedures in this section require that you deenergize the processor and remove the TOP COVER before beginning the first step of the service procedure. For more information about how to deenergize the processor, see page 1-7. For more information about how to remove the TOP COVER of the processor, see page 1-3.

## Overview of Roller Transport



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**Figure 2-1 Drive-side View of Roller Transport**

## Crossover Assemblies

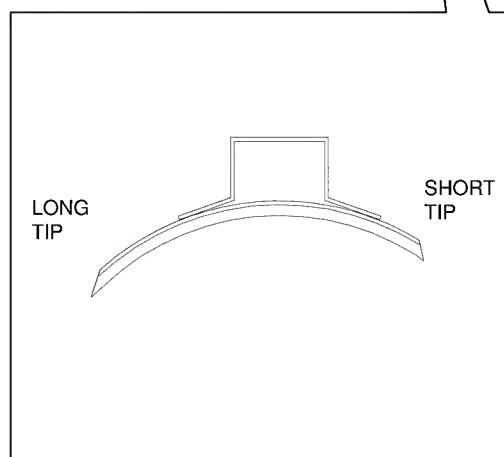
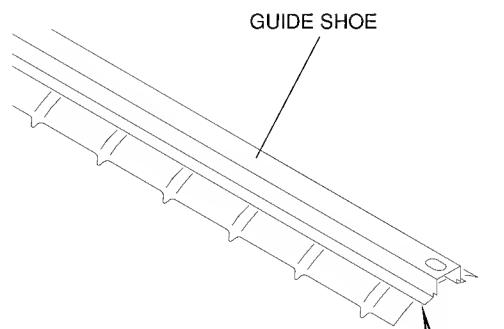
### Adjusting the Side Plates

- [1] Remove the DETECTOR CROSSOVER ASSEMBLY from the processor.
- [2] Set the DETECTOR CROSSOVER ASSEMBLY on a flat surface.
- [3] Loosen the SCREWS of the TIE RODS.
- [4] Check the SIDE PLATES for squareness against the flat surface.
- [5] Tighten the SCREWS.

#### NOTE

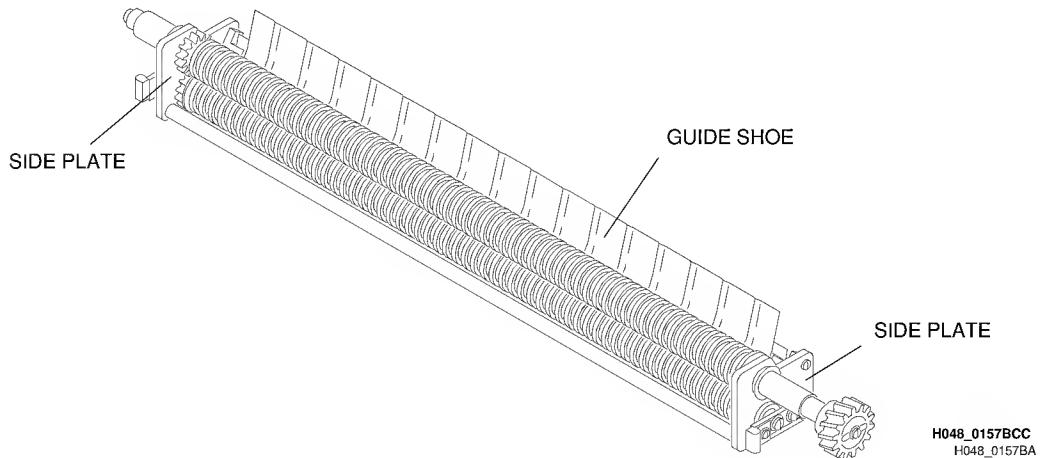
The GUIDE SHOES are not adjustable.

- [6] Check that the longer TIPS of the GUIDE SHOES are in the direction of the film travel.
- [7] Do this procedure for each CROSSOVER ASSEMBLY.



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Figure 2-2 Checking the Guide Shoes



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Figure 2-3 Adjusting the Side Plates of the Detector Crossover Assembly

## Rack Assemblies

### Adjusting the Chain

- [1] Check that the CHAIN is wet with solution.
- [2] Check that the RACK ASSEMBLY is almost the same temperature as the solutions in the tanks.
- [3] Loosen the 4 HOLDING SCREWS.
- [4] Hold the RACK ASSEMBLY above the work surface. This will allow the TURNAROUND to move by gravity to provide the correct tension on the CHAIN.
- [5] Tighten the 2 HOLDING SCREWS on the drive side.
- [6] Rotate the DRIVE GEAR one full rotation.
- [7] Set the RACK ASSEMBLY down on the work surface.
- [8] Using the ADJUSTING SCREWS, make the distance between the RACK SIDE PLATE and the TURNAROUND SIDE PLATE on the non-drive side equal to the drive side.
- [9] Tighten the 2 HOLDING SCREWS on the non-drive side.

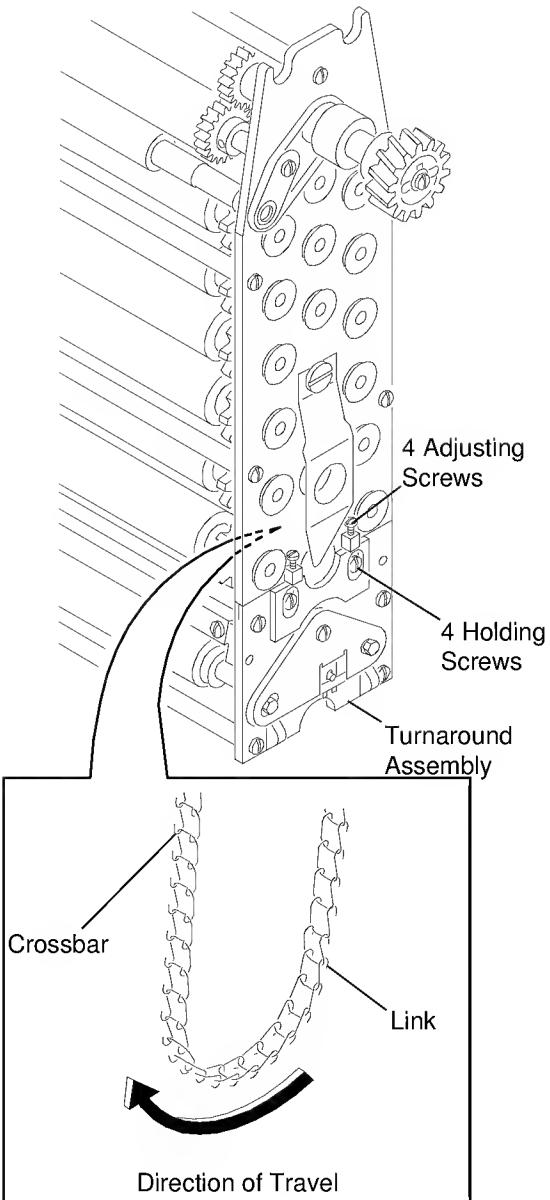
### Installing the Chain

- [1] To open the CHAIN, insert a SCREWDRIVER under the open end of each LINK. Rotate the SCREWDRIVER.
- [2] Install the CROSSBAR of each LINK in the direction of travel, with the LINKS opening outward. See figure 2-4.
- [3] Attach the new CHAIN to the existing CHAIN.
- [4] Pull the existing CHAIN through the RACK until the new CHAIN is in the correct position.

#### IMPORTANT

When closing the open LINK of the new CHAIN, do not change the pitch of the curved side of the LINK.

- [5] Disconnect the existing CHAIN from the new CHAIN. Fasten the ends of the new CHAIN together.
- [6] Adjust the tension of the CHAIN. Use the procedure above.



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Figure 2-4 Adjusting the Tension of the Chain

## Resilient G Roller (Developer and Fixer Racks)

### Removing and Installing the G Roller

- [1] At the top of the RACK ASSEMBLY, remove the SPRING from both ends. See Figures 2-5 and 2-6.
- [2] Remove the SCREWS, WASHERS, GEAR, SPACERS, and BEARINGS from the outside of both SIDE PLATES.
- [3] Rotate the SHAFT so that the KEYWAY is in the up position. See Figure 2-6.
- [4] Pull the ROLLER to the non-drive side and remove the KEY from the SPROCKET.
- [5] Pull the SHAFT to the non-drive side to be free of the SIDE PLATE.
- [6] Remove the THRUST WASHER, SPROCKET, and SPACER.
- [7] Continue to pull the SHAFT to the non-drive side.
- [8] Remove the ROLLER.
- [9] Reverse the procedure to assemble.

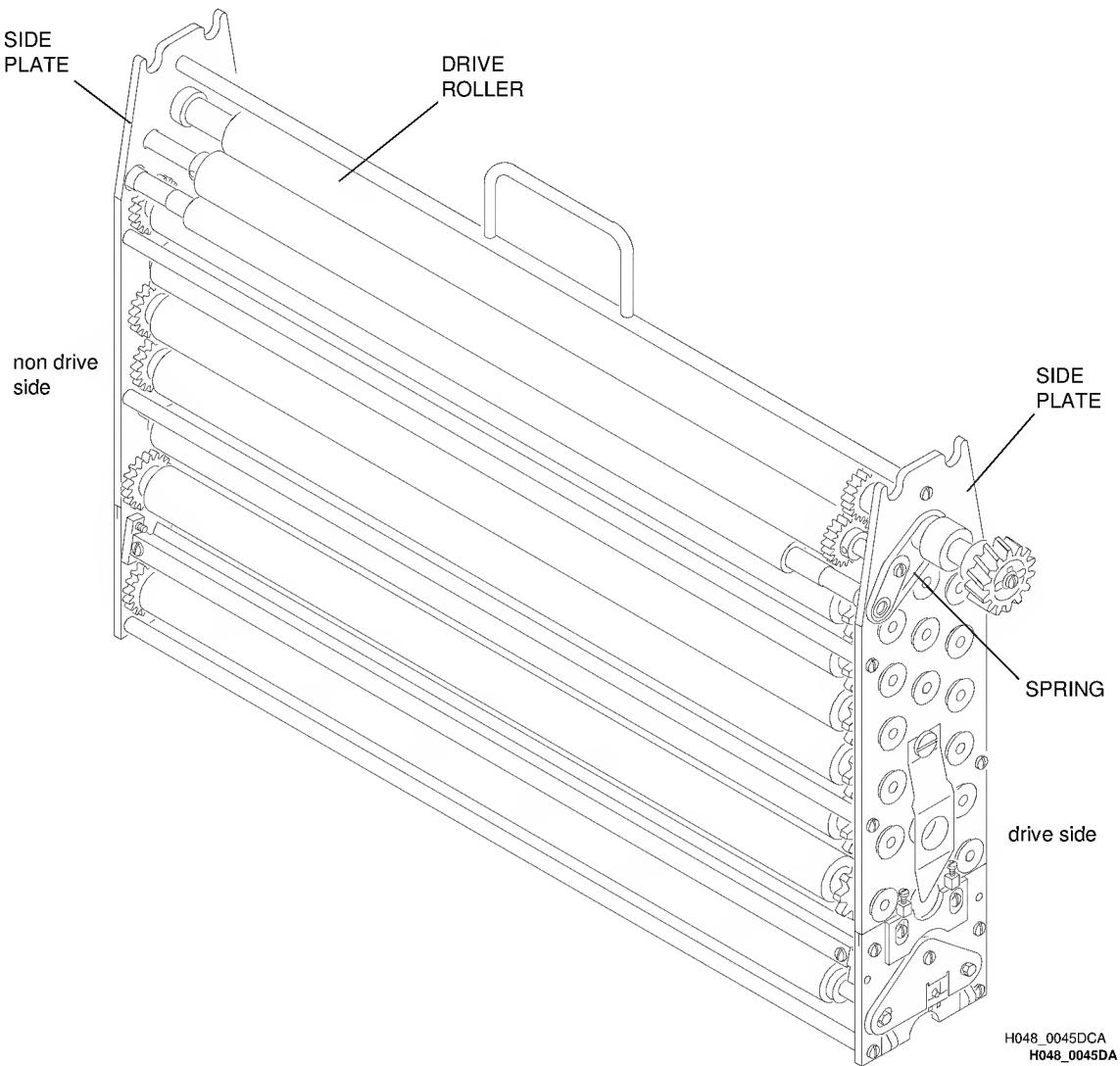


Figure 2-5 Removing the Resilient G Roller from the Developer or Fixer Rack

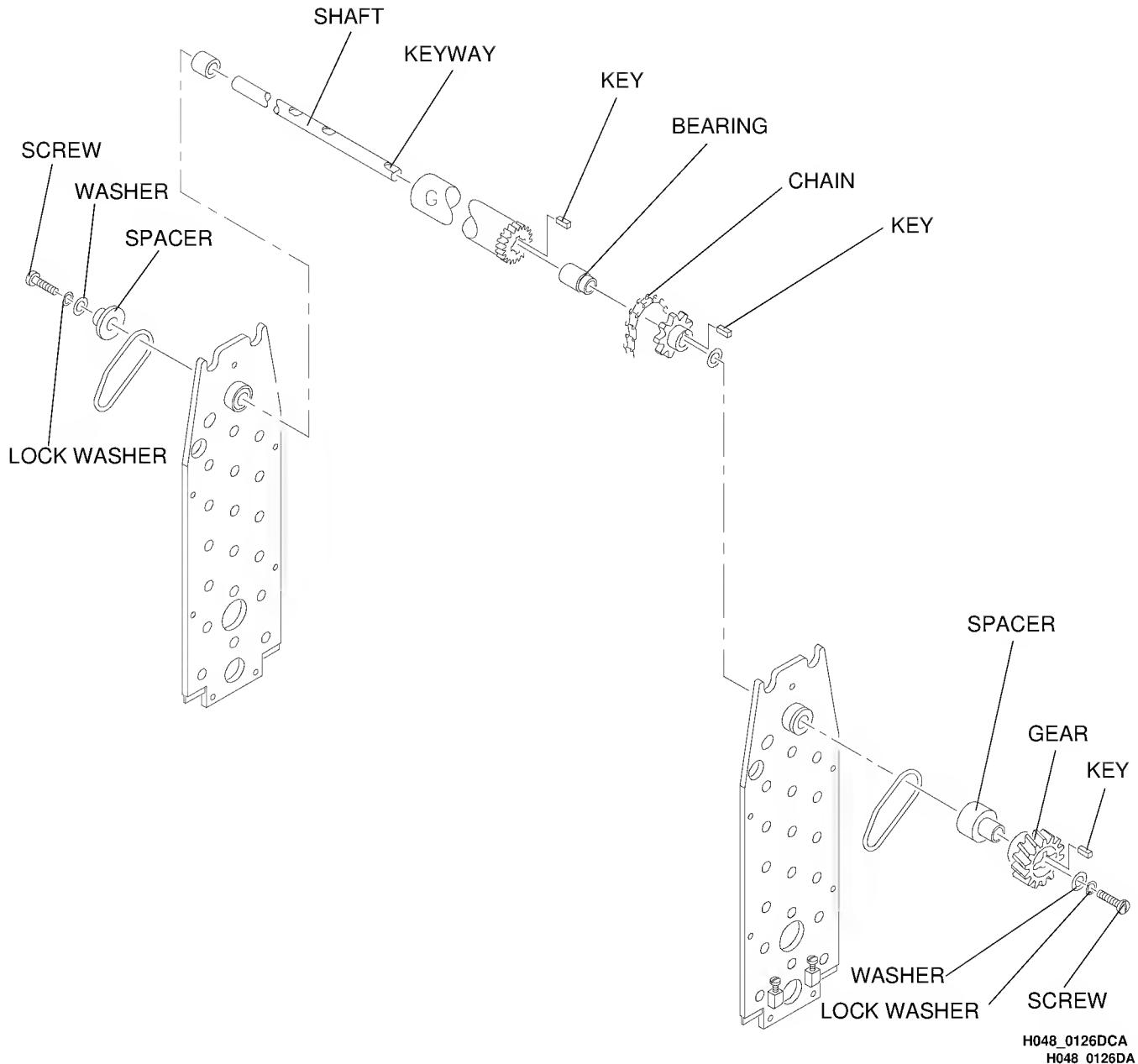


Figure 2-6 Disassembling the G Roller

## **Resilient Pressure Drive Roller (Wash Rack)**

### **Removing and Installing the Drive Roller**

- [1]** Remove the following:
  - TIE ROD SHAFTS
  - SCREWS, GEAR, SPACERS, and BEARINGS from the outside of both SIDE PLATES. See figure 2-7.
- [2]** Rotate the KEYWAY to the up position.
- [3]** Pull the ROLLER to the non-drive side and remove the KEY from the SPROCKET.
- [4]** Remove the 2 SPRINGS.
- [5]** Pull the ROLLER to the drive side. Flex the SIDE PLATE to allow removal of the ROLLER.
- [6]** Reverse the procedure to assemble.

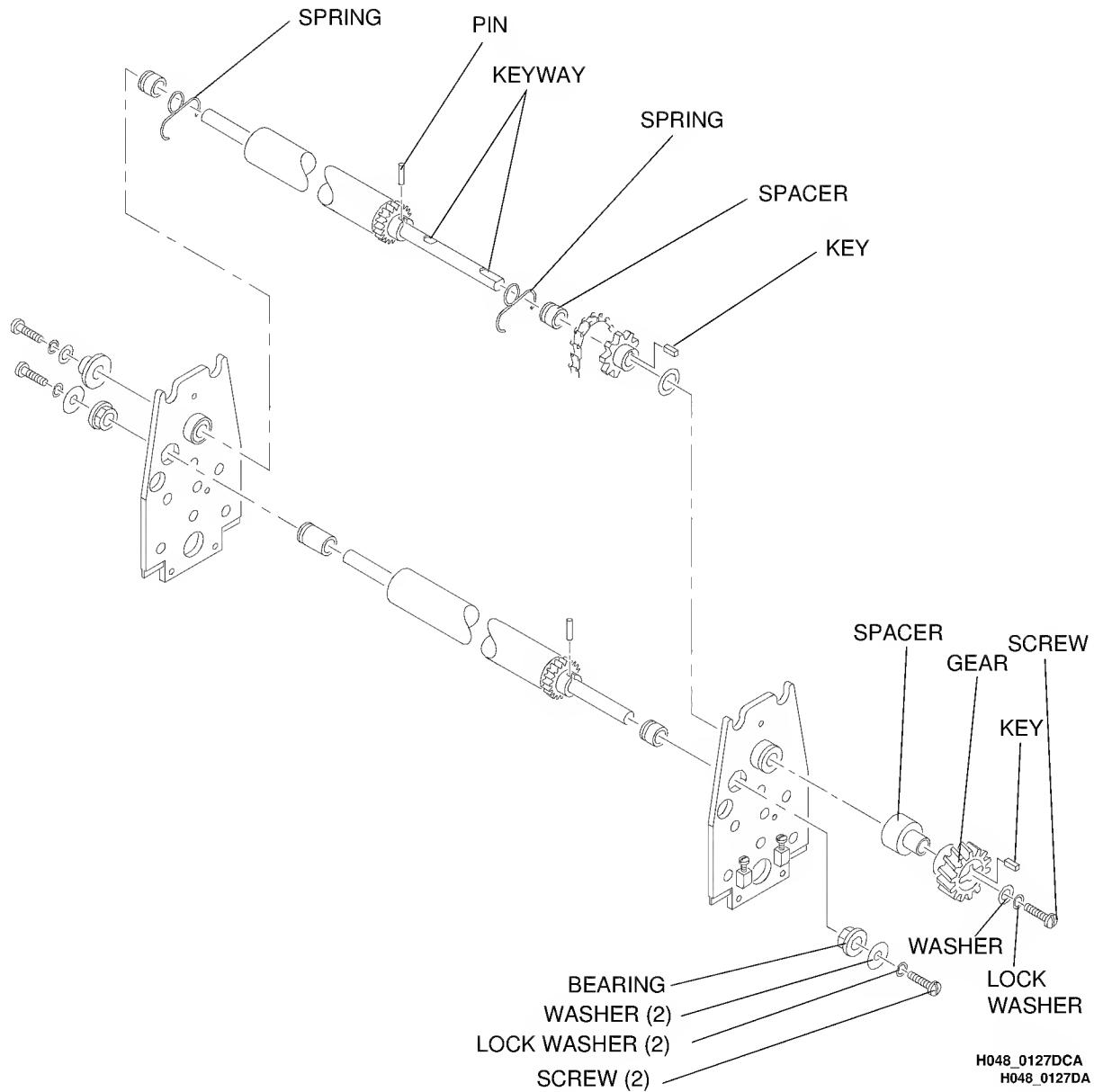


Figure 2-7 Disassembling the Resilient Pressure Drive Roller from the Wash Rack

## Turnaround Assembly

### Disassembling the Turnaround Assembly

#### NOTE

Figure 2-8 shows a WASH RACK; however, the procedure is the same for the disassembly of all RACKS.

- [1] Loosen the 4 ADJUSTING SCREWS.
- [2] Remove the 4 HOLDING SCREWS.
- [3] Open the CHAIN.
- [4] Remove the top section of the RACK from the TURNAROUND ASSEMBLY.
- [5] Remove:
  - EXIT GUIDE SHOE and the 2 BRACKETS
  - 2 SPRINGS and LOCKING PLATE from the TURNAROUND
  - Both "A" ROLLERS.
- [6] From the non-drive side, pull the SHAFT from the "B" ROLLER.
- [7] Remove the TURNAROUND ASSEMBLY.

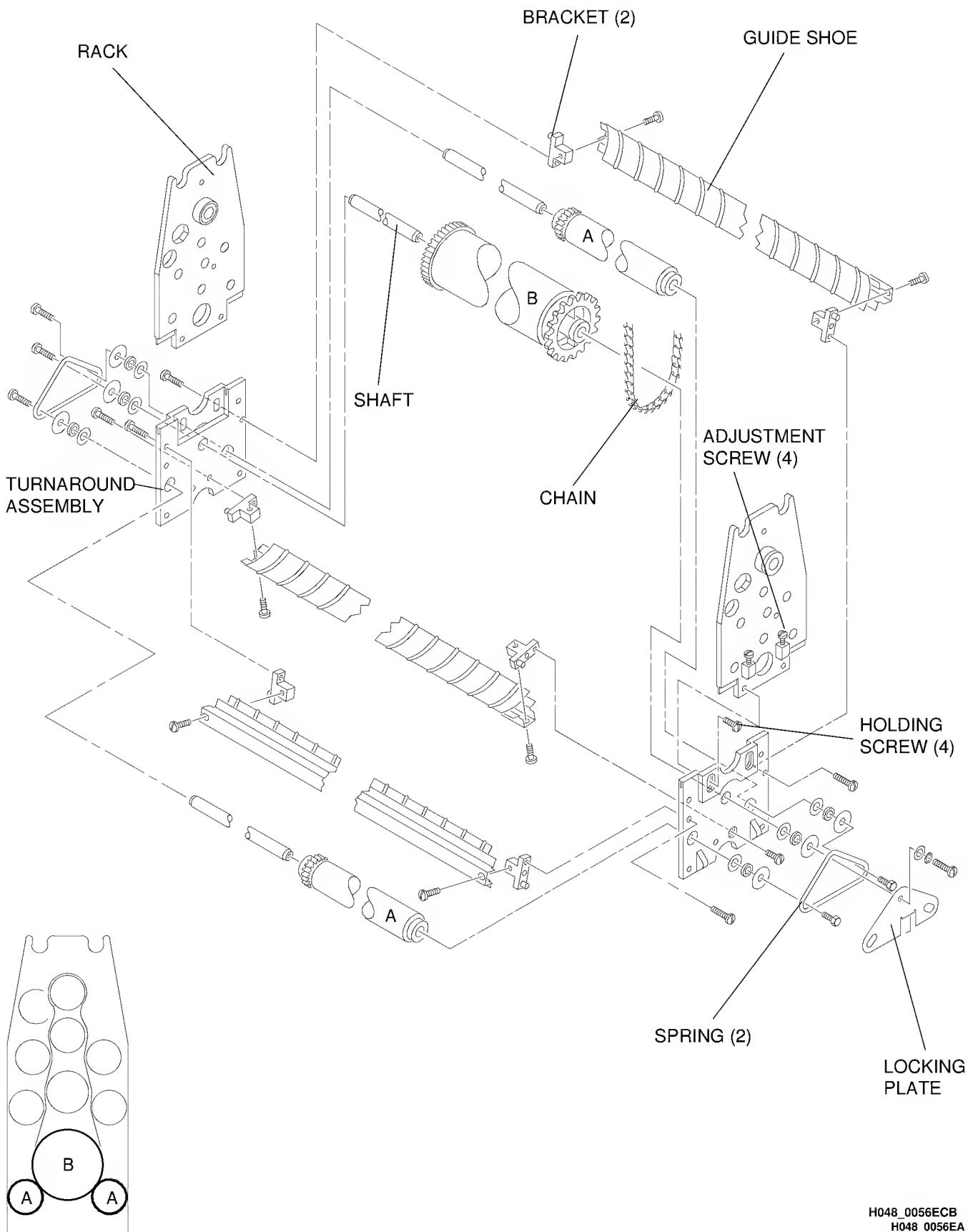


Figure 2-8 Disassembling the Rack Assembly

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H048\_0056EA

## B Roller

### Removing and Installing the B Roller

- [1] Remove the ROLLER from the SHAFT. Pull the BEARING with the SHAFT.
- [2] Install the ROLLER onto the SHAFT.
- [3] Check that the CHAIN has the correct tension. See figure 2-10.

### Checking the Guide Shoes

- [1] Check that the LONG TIPS are in the direction of film travel. See figure 2-2.

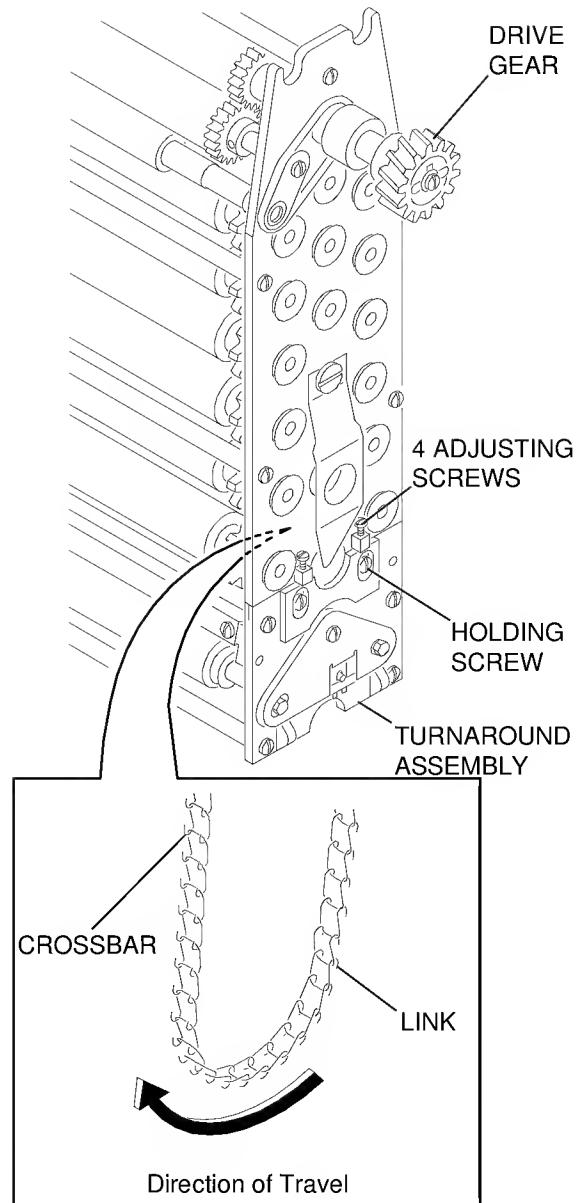
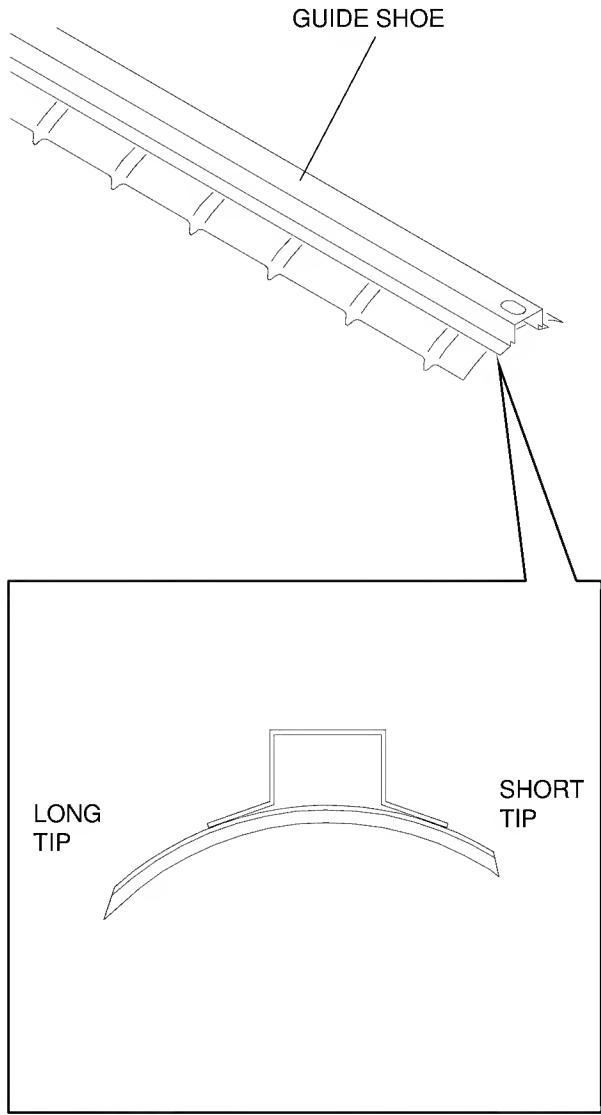


Figure 2-10 Checking the Tension of the Chain

Figure 2-9 Checking the Guide Shoes

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## **SECTION 3**

### **Main Drive**

#### **IMPORTANT**

All the procedures in this section require that you deenergize the processor before beginning the first step of the service procedure; and many of the procedures require that you remove the TOP COVER, and the ACCESS PANELS from the processor before beginning the procedure. For more information about how to deenergize the processor, see page 1-7. For more information on how to remove the TOP COVER and the ACCESS PANELS of the processor, see pages 1-3 through 1-5.

## Adjusting the Sprocket Alignment on the Main Drive Chain

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the TOP COVER and DRIVE SIDE ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

- [1] Remove the FILTER BEZEL and the SPLASH GUARD.
- [2] Loosen the SETSCREW on the MOTOR SHAFT SPROCKET. See Figure 3-1
- [3] Move the MOTOR SHAFT SPROCKET into alignment with the DRIVE SHAFT SPROCKET.
- [4] Tighten the SETSCREW.

## Adjusting the Chain Tension

- [5] Loosen the 2 MOTOR MOUNTING BOLTS.

### IMPORTANT

Check the tension of the MOTOR DRIVE CHAIN between the DRIVE SHAFT SPROCKET and the MOTOR SHAFT SPROCKET.

- [6] Move the MOTOR to adjust the MOTOR DRIVE CHAIN for the correct tension. Allow a deflection of  $\frac{1}{8}$  in. to  $\frac{1}{4}$  in. (3.2 to 6.4 mm).

### NOTE

Do not make the MOTOR DRIVE CHAIN too tight.

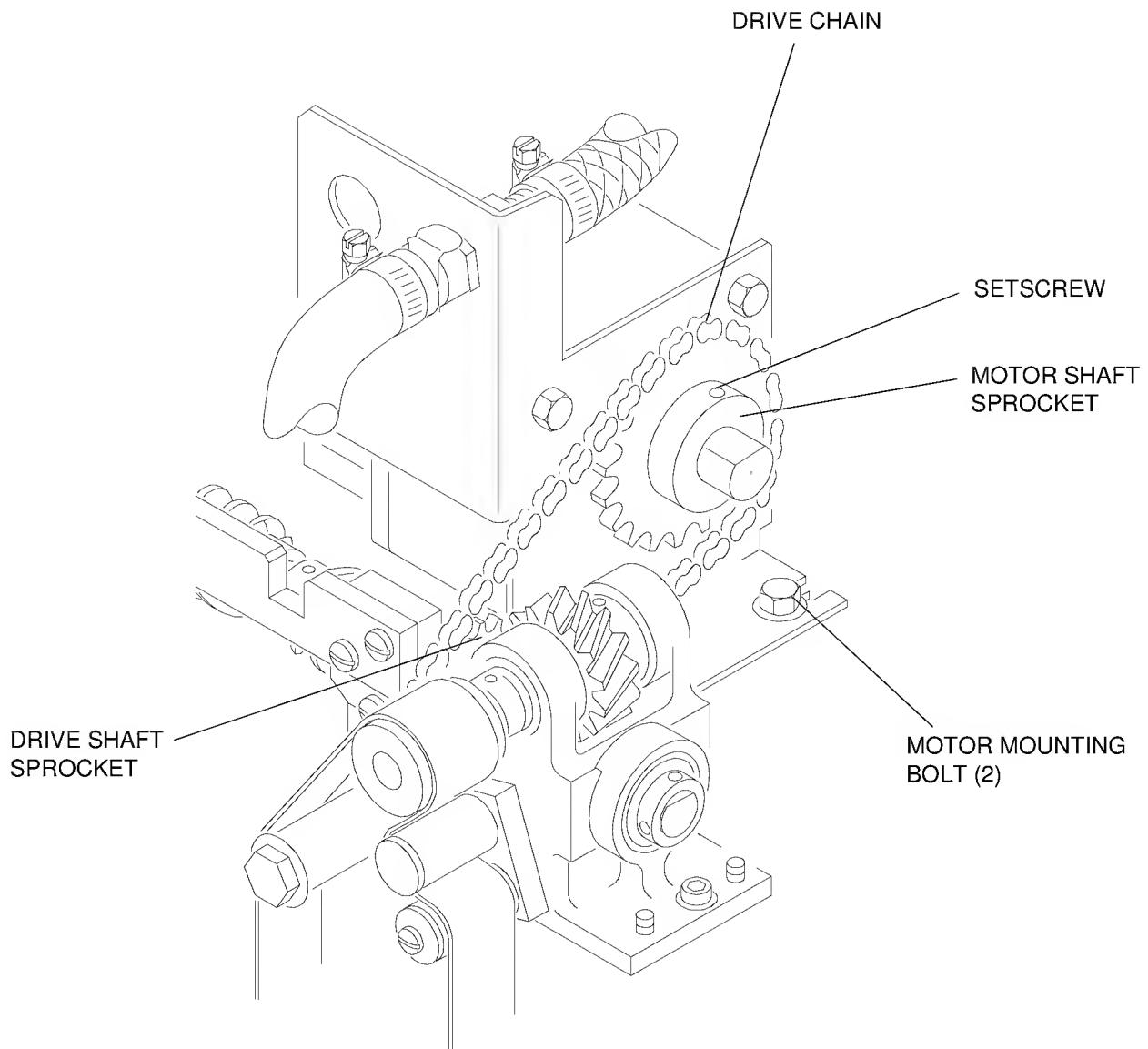
## Lubricating the Chain



### CAUTION

Do not allow the DRIVE CHAIN to operate without lubrication.

- [7] Check that the MOTOR DRIVE CHAIN is lubricated.
  - If the MOTOR DRIVE CHAIN is dry, apply lubricant to the CHAIN. Use NLG1-No. 2 Lithium Ball and Roller Bearing Grease TL-2324.
  - If the MOTOR DRIVE CHAIN is rusty, remove the CHAIN and install a new MOTOR DRIVE CHAIN.



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**Figure 3-1 Aligning the Motor Drive Shaft Sprocket**

## Removing the Main Drive Motor and Gear Box

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the TOP COVER and DRIVE SIDE ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary. Also, make sure that the water supply to the processor is shut off for this procedure.

- [1] Remove the FILTER BEZEL and SPLASH GUARD.
- [2] Disconnect the WATER HOSE from the MOTOR MOUNT BRACKET.
- [3] Loosen the 2 MOTOR BRACKET MOUNTING BOLTS.
- [4] Remove the CHAIN from the SPROCKET.
- [5] Remove the SPROCKET from the MOTOR.
- [6] Disconnect the MOTOR CONNECTOR J30.
- [7] Remove the MOTOR and BRACKET ASSEMBLY from the processor.
- [9] Install the new MOTOR and/or GEAR BOX to the BRACKET using the 4 MOTOR BRACKET MOUNTING SCREWS removed previously.
- [10] Install all parts removed in previous steps and make all necessary connections.
- [11] Energize the processor by moving the MAIN CIRCUIT BREAKER, CB1, to the "I" position.
- [12] Check that all cycle speeds are operating correctly and not producing any error codes.
- [13] Deenergize the processor by moving the MAIN CIRCUIT BREAKER, CB1, to the "O" position.



Hold the MOTOR when removing the 4 MOTOR BRACKET MOUNTING SCREWS so that the MOTOR does not fall.

- [8] Remove the 4 MOTOR BRACKET MOUNTING SCREWS that hold the MOTOR and GEAR BOX to the BRACKET.

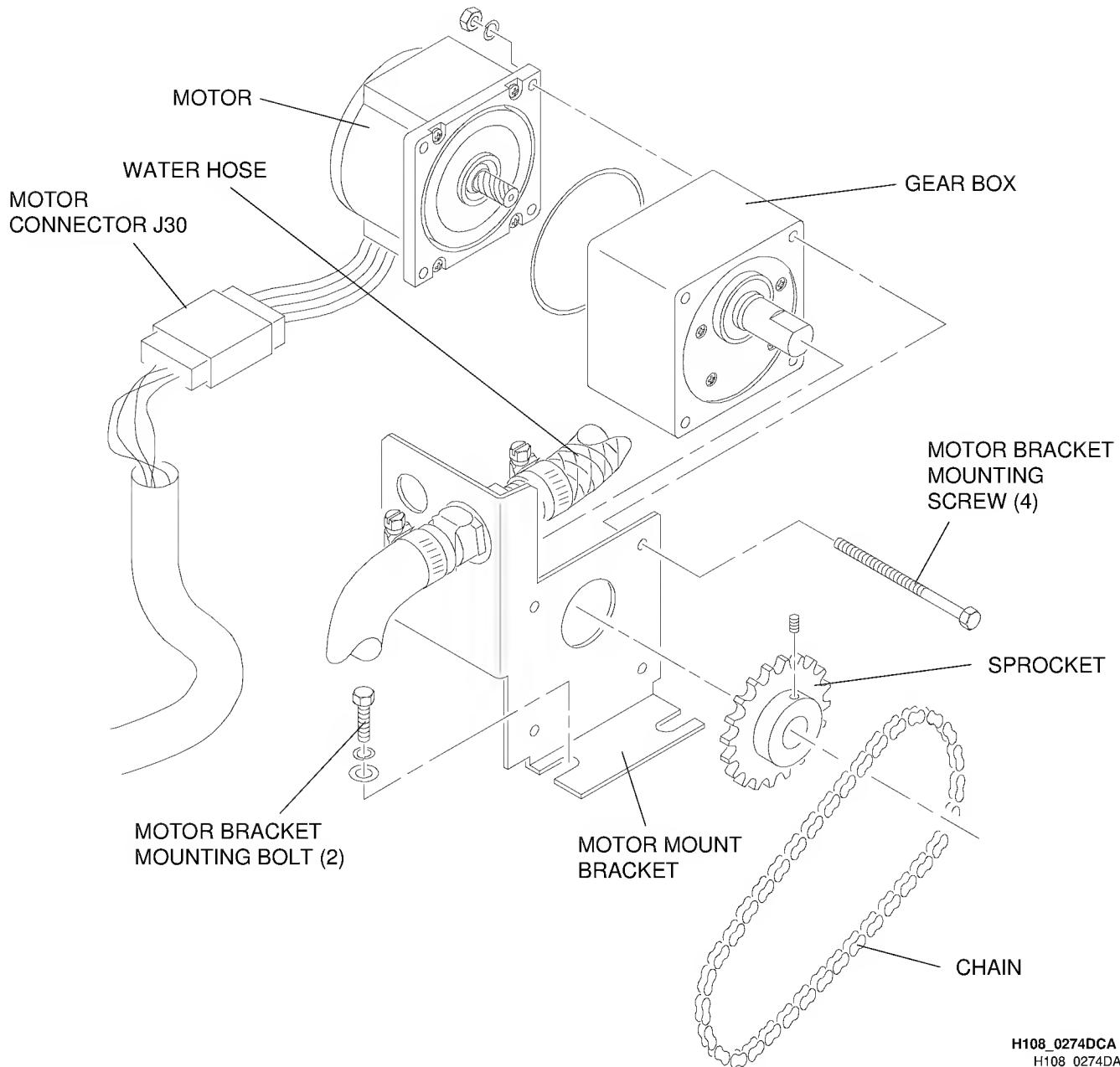


Figure 3-2 Removing the Main Drive Motor

## Removing the Drive Shaft Assembly

### IMPORTANT

For this procedure the processor must be deenergized, and the TOP COVER and RECEIVING-END ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-7 for instructions, if necessary.

- [1] Remove the FILTER BEZEL and SPLASH GUARD.
- [2] Remove the SPRING from the TENSION ROLLER ARM.
- [3] Move the DRYER DRIVE BELT off the DRIVE PULLEY.

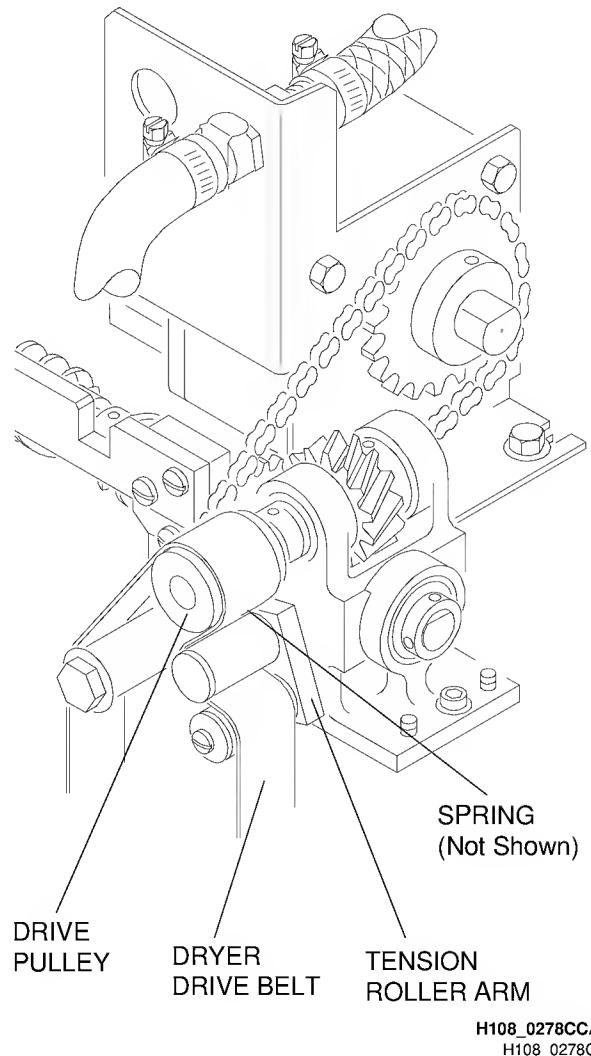
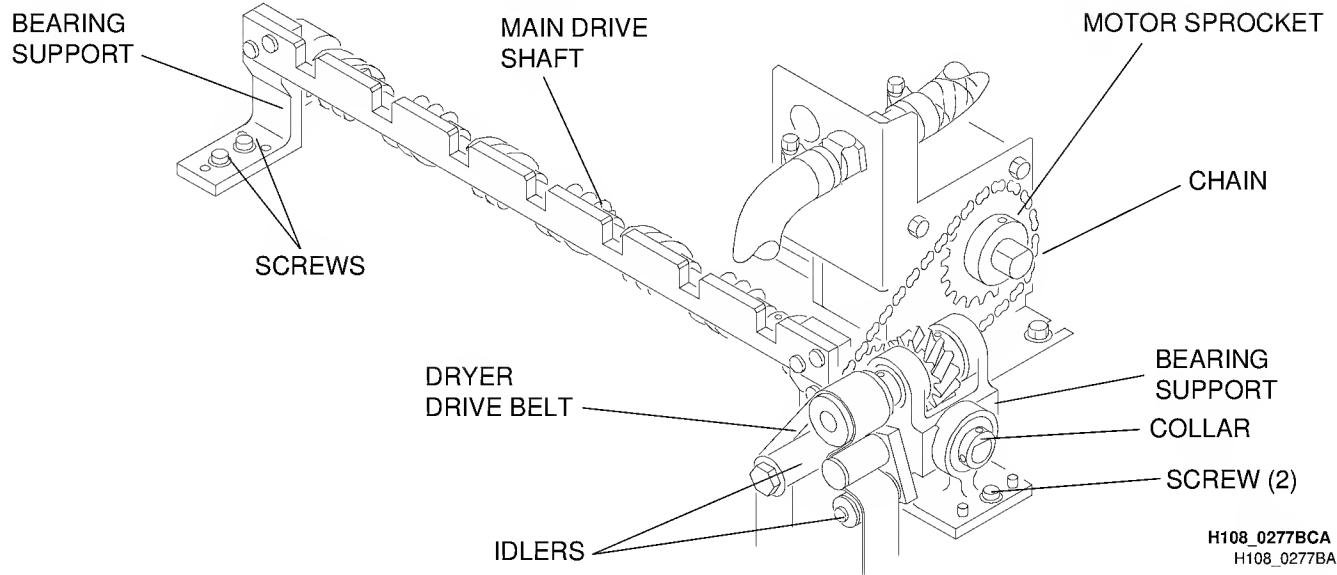


Figure 3-3 Removing the Spring

- [4] Remove the 4 SCREWS that hold the 2 BEARING SUPPORTS.
- [5] Remove the CHAIN from the MOTOR SPROCKET.
- [6] Remove the MAIN DRIVE SHAFT ASSEMBLY from the processor.
- [7] Remove the COLLAR from each end of the MAIN DRIVE SHAFT.
- [8] Remove the 2 BEARING SUPPORTS.
- [9] Install the 2 BEARING SUPPORTS onto the new MAIN DRIVE SHAFT.
- [10] Install all parts removed in previous steps.



**Figure 3-4 Removing the Main Drive Shaft**

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## **SECTION 4**

### **Dryer**

#### **IMPORTANT**

All the procedures in this section require that you deenergize the processor before beginning the first step of the service procedure; and many of the procedures require that you remove the TOP COVER, and the ACCESS PANELS from the processor before beginning the procedure. For more information about how to deenergize the processor, see page 1-7. For more information about how to remove the TOP COVER and the ACCESS PANELS of the processor, see pages 1-3 through 1-5.

## Removing the Blower Assembly

### IMPORTANT

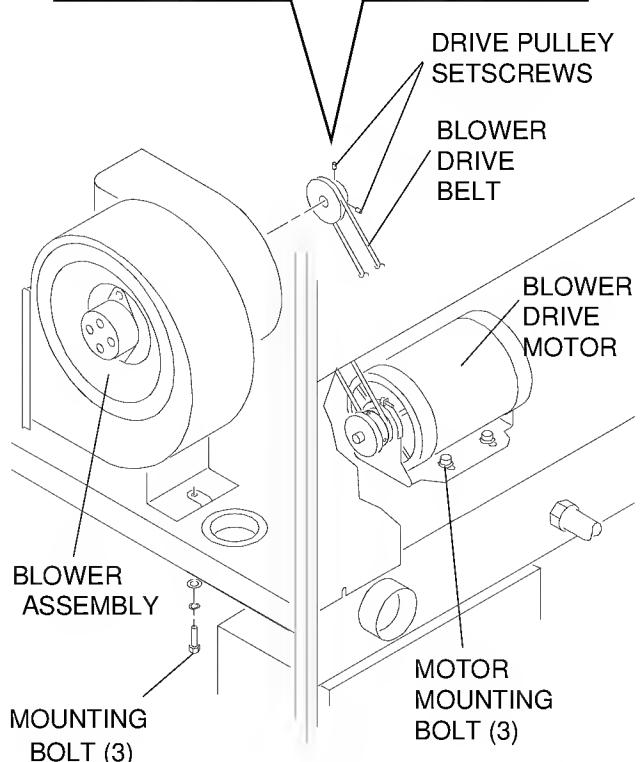
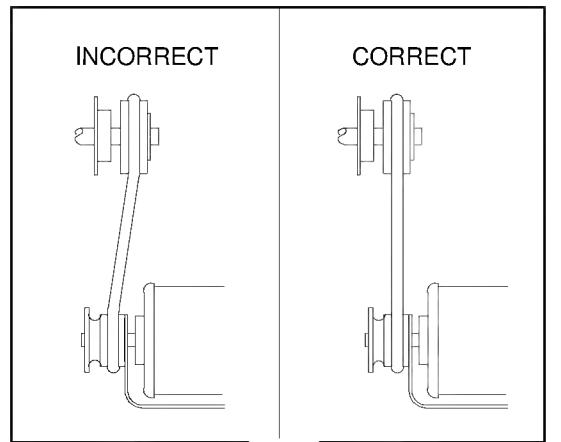
For this procedure the processor must be deenergized. See page 1-7. In addition, the DRIVE SIDE ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

- [1] Remove the COVER from the BLOWER DRIVE MOTOR.
- [2] Remove the 3 MOUNTING BOLTS from the BLOWER ASSEMBLY and BLOWER DRIVE BELT.
- [3] Remove the BLOWER ASSEMBLY.
- [4] Loosen the 2 SETSCREWS to remove the BLOWER DRIVE BELT PULLEY from the BLOWER ASSEMBLY.
- [5] Install the BLOWER DRIVE BELT PULLEY onto the new BLOWER ASSEMBLY.
- [6] Install the new BLOWER ASSEMBLY using the 3 MOUNTING BOLTS removed in step 2.
- [7] For correct operation of the BLOWER DRIVE BELT, align the BLOWER DRIVE MOTOR and the BLOWER DRIVE BELT PULLEYS.
- [8] Install the BLOWER DRIVE BELT.



Correct tension is achieved when the BLOWER DRIVE BELT does not make loud noises when you energize the processor. This step requires that you energize the processor in order to test for correct tension, and then deenergize the processor to correct the tension.

- [9] Adjust the position of the BLOWER DRIVE MOTOR to obtain the correct tension of the BLOWER DRIVE BELT.
- [10] Install the BLOWER MOTOR COVER.



H108\_0074CCB  
H108\_0074CA

**Figure 4-1 Removing the Blower Assembly**

## Removing a Dryer Blower Bearing

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the DRIVE SIDE ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

#### Inner Bearing

- [1] Remove the BLOWER MOTOR COVER from the BLOWER DRIVE MOTOR.
- [2] Remove the BLOWER DRIVE BELT.
- [3] Loosen the 2 SETSCREWS on the BLOWER DRIVE BELT PULLEY.
- [4] Remove the BLOWER DRIVE BELT PULLEY.

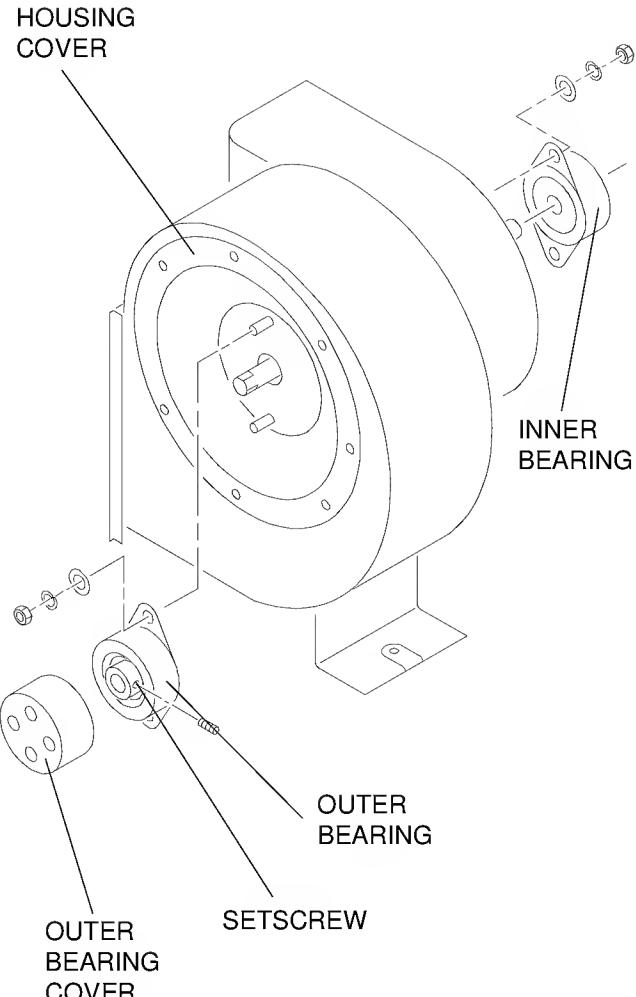
#### NOTE

If necessary, loosen the BLOWER MOTOR.

- [5] Loosen the 2 SETSCREWS on the INNER BEARING.
- [6] Remove the 2 NUTS, 2 WASHERS, and 2 LOCK WASHERS.
- [7] Remove the INNER BEARING.
- [8] Install the new INNER BEARING.
- [9] Install all parts removed in previous steps.
- [10] Check the alignment and tension of the BLOWER DRIVE BELT. See page 4-6, if necessary.

#### Outer Bearing

- [1] Remove the OUTER BEARING COVER.
- [2] Loosen the 2 SETSCREWS on the OUTER BEARING.
- [3] Remove the 2 NUTS, 2 WASHERS, and 2 LOCK WASHERS.
- [4] Remove the OUTER BEARING.
- [5] Install the new OUTER BEARING.
- [6] Install all parts removed in previous steps.
- [7] Check the alignment and tension of the BLOWER DRIVE BELT. See page 4-6, if necessary.



H108\_0082CCA  
H108\_0082CA

Figure 4-2 Removing the Bearings

## Removing the Blower Impeller Shaft

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the DRIVE SIDE ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

- [1] Remove the BLOWER MOTOR COVER from the BLOWER DRIVE MOTOR.
- [2] Remove the BLOWER DRIVE BELT.
- [3] Loosen the 2 DRIVE PULLEY SETSCREWS.
- [4] Remove the BLOWER DRIVE BELT PULLEY.
- [5] Loosen:
  - INNER BEARING SETSCREWS
  - OUTER BEARING SETSCREWS.
- [6] Remove the SCREWS and the HOUSING COVER. See figure 4-4.
- [7] Remove the IMPELLER SHAFT and IMPELLER ASSEMBLY.
- [8] Loosen the IMPELLER SETSCREWS.
- [9] Remove the IMPELLER ASSEMBLY from the IMPELLER SHAFT.
- [10] Install a new IMPELLER ASSEMBLY onto the IMPELLER SHAFT.
- [11] Install all parts removed and tighten the SCREWS.
- [12] For correct operation of the BLOWER DRIVE BELT, align the BLOWER DRIVE MOTOR and the BLOWER DRIVE BELT PULLEYS.

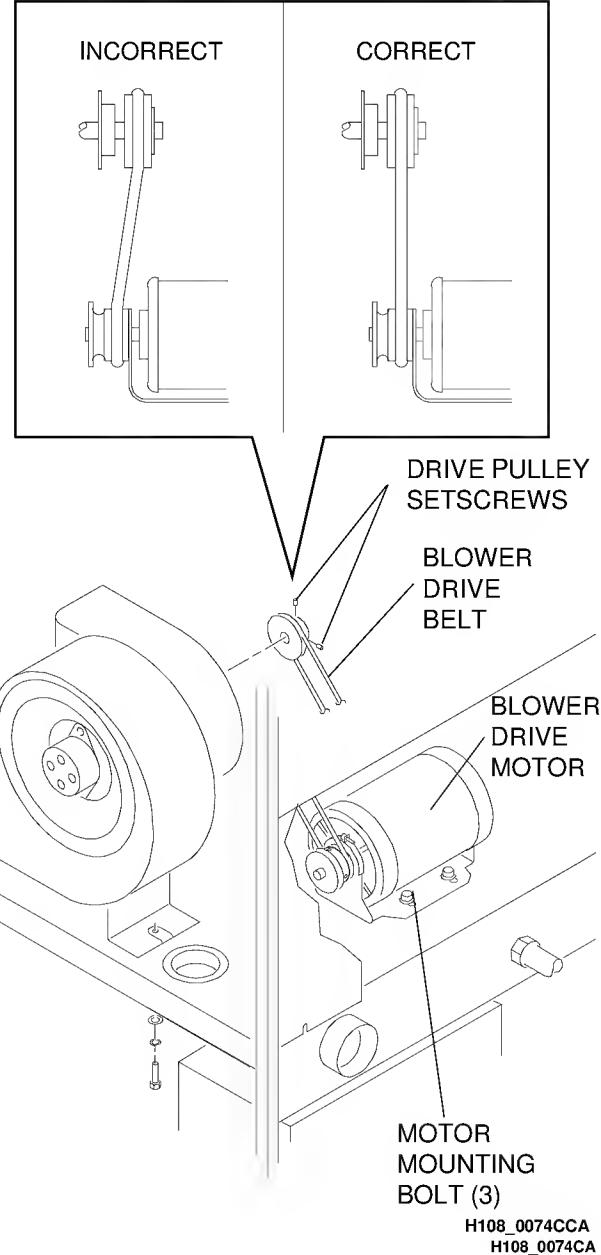
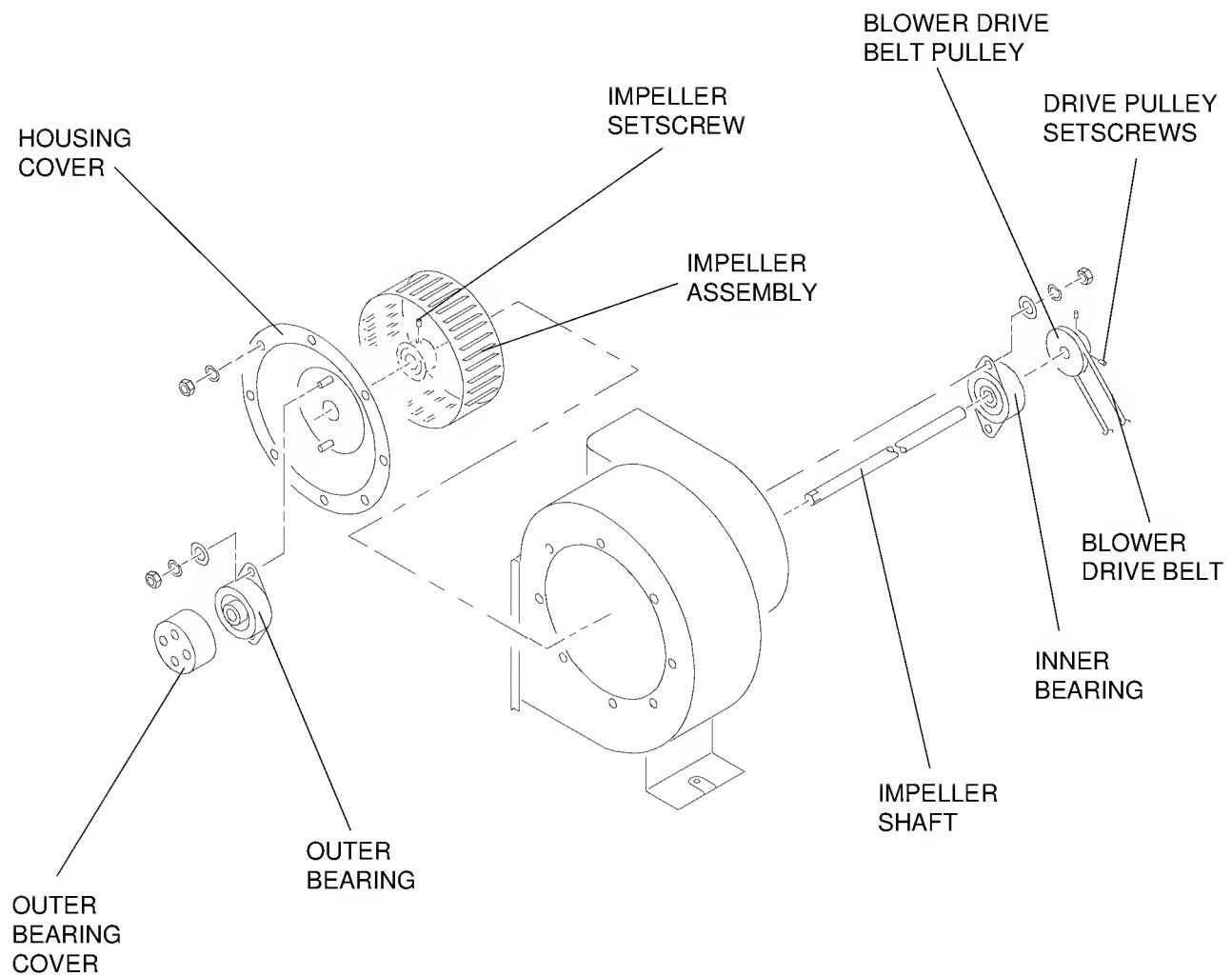


Figure 4-3 Removing the Blower Motor Cover



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H108\_0073DA

Figure 4-4 Removing the Blower Impeller Shaft

## Removing the Blower Drive Belt

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the FEED-END, MIDDLE ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

- [1] Loosen the SCREW and WASHER to remove the BLOWER MOTOR COVER from the BLOWER DRIVE MOTOR.
- [2] Loosen the 3 MOTOR MOUNTING BOLTS.
- [3] Move the BLOWER DRIVE MOTOR to loosen the BLOWER DRIVE BELT.
- [4] Install the new BLOWER DRIVE BELT, and move the BLOWER DRIVE MOTOR to tighten the BLOWER DRIVE BELT.

### Aligning the Blower Drive Belt

- [5] Loosen the 2 DRIVE PULLEY SETSCREWS.
- [6] Move the BLOWER PULLEY until the BLOWER DRIVE BELT is straight.
- [7] Tighten the 2 DRIVE PULLEY SETSCREWS.

### Adjusting the Blower Drive Belt

- [8] Loosen the 3 MOTOR MOUNTING BOLTS.
- [9] Adjust the position of the BLOWER DRIVE MOTOR to achieve the correct tension of the BLOWER DRIVE BELT.

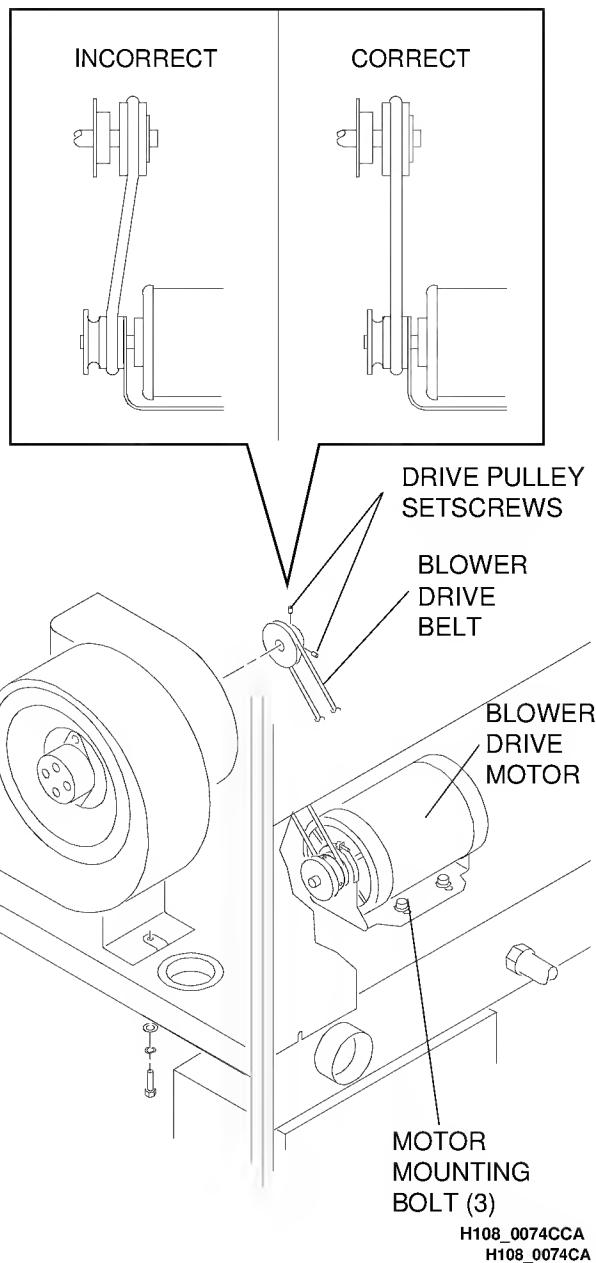


Figure 4-5 Aligning the Blower Drive Belt

### CAUTION

Correct tension is obtained if the BLOWER DRIVE BELT does not make loud noises when you energize the processor. This step requires that you energize the processor in order to test for correct tension, and then deenergize the processor to correct the tension.

- [10] When the correct tension of the BLOWER DRIVE BELT is obtained, tighten the 3 MOTOR MOUNTING BOLTS.

## Removing the Air Plenum

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the RECEIVING-END and NON-DRIVE SIDE ACCESS PANELS must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

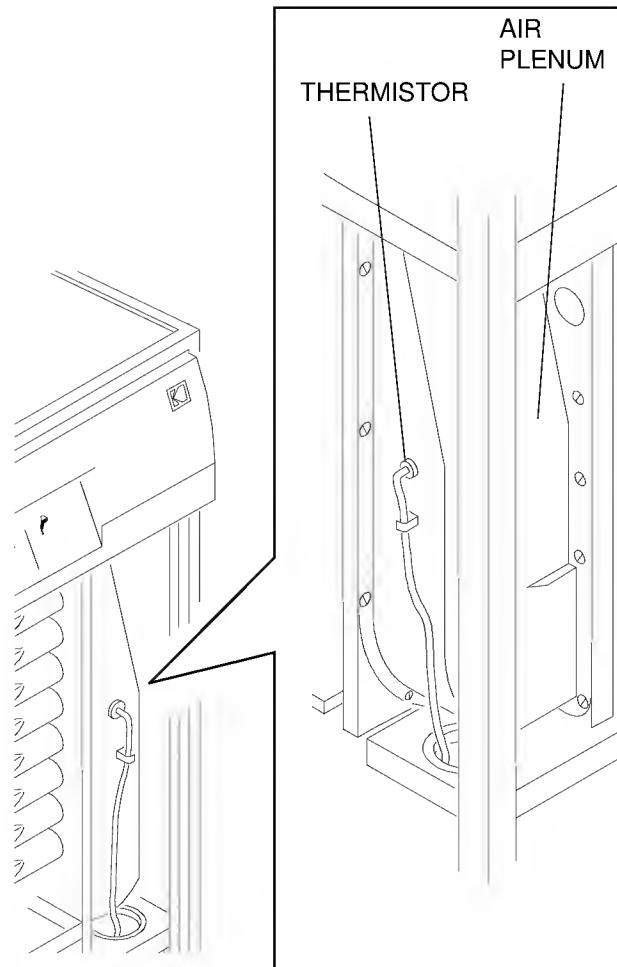
### NOTE

If the DRIVE SIDE of the processor is against the WALL, use a small OFFSET SCREWDRIVER TL-1611 and a SCREWDRIVER with HOLDER TL-1194 to do this procedure.

- [1] Remove:
  - SCREWS
  - THERMISTOR and CABLING
  - AIR PLENUM.
- [2] Disconnect CONNECTOR P/J 17 at the ELECTRICAL BOX.
- [3] Install all parts removed in previous steps.

### NOTE

When installing the THERMISTOR, use SILASTIC SEALANT RTV 102 TL-2191 or equivalent.



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H108\_0232CA

Figure 4-6 Removing the Air Plenum

## Removing a Dryer Transport Roller Pulley

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the RECEIVING-END ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

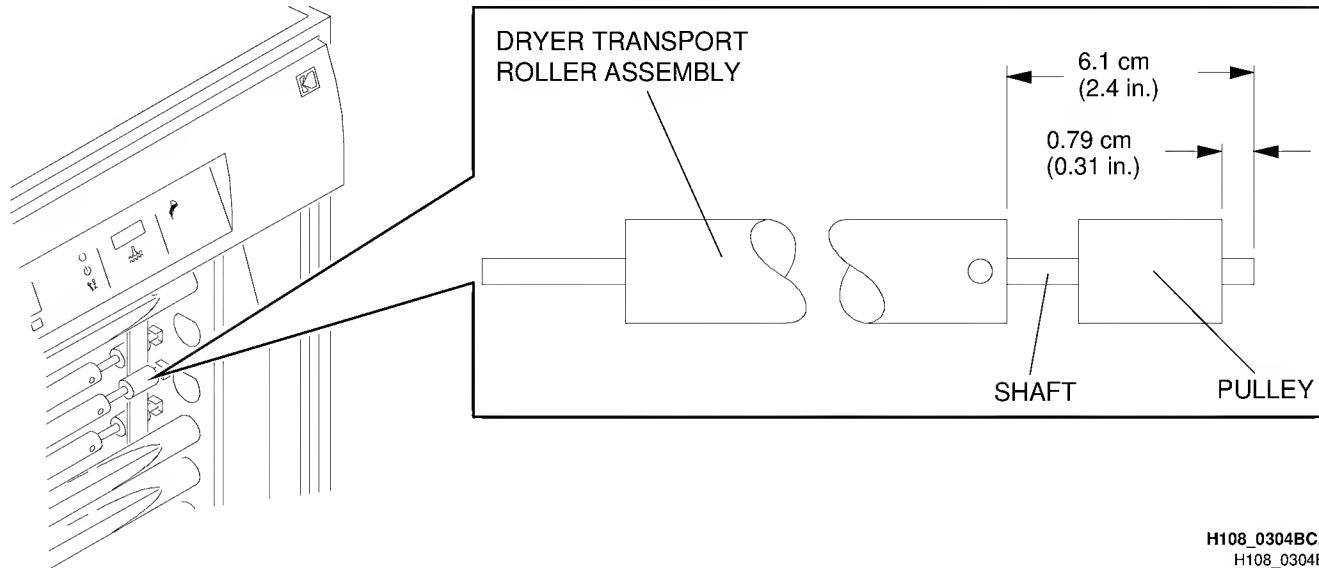
**[1]** Remove:

- DRYER TRANSPORT ROLLER ASSEMBLY
- PULLEY.

### NOTE

If the PULLEY is tight, it may be necessary to remove the SHAFT and gently tap the SHAFT loose from the PULLEY. Be careful not to damage the end of the SHAFT.

- [2]** To lubricate the new PULLEY, place it in hot water.
- [3]** Install the new PULLEY onto the SHAFT.
- [4]** Align the new PULLEY.
- [5]** Install the DRYER TRANSPORT ROLLER ASSEMBLY.



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H108\_0304BA

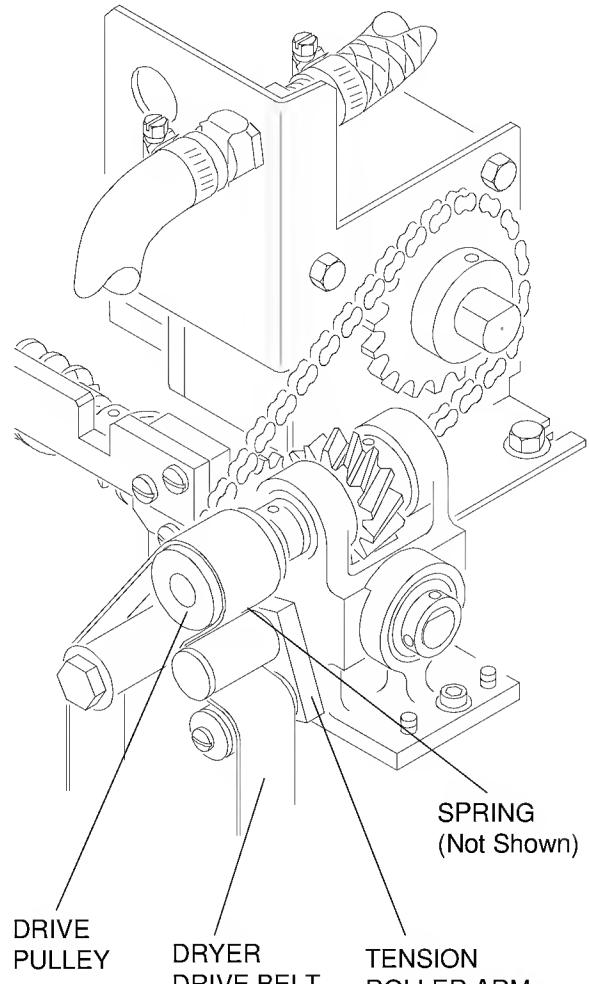
Figure 4-7 Removing a Roller Pulley

## Removing the Dryer Drive Pulley

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. The TOP COVER must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

- [1] Remove the SPRING from the TENSION ROLLER ARM.
- [2] Move the DRYER DRIVE BELT off the DRIVE PULLEY.
- [3] Remove the PIN from the DRIVE PULLEY.
- [4] Remove the DRIVE PULLEY.
- [5] Install a new PULLEY and PIN.
- [6] Place the DRYER DRIVE BELT onto the DRIVE PULLEY.
- [7] Install the SPRING on the TENSION ROLLER ARM.
- [8] If the DRYER DRIVE BELT does not remain in the middle of the DRIVE PULLEY, do the Dryer Belt Tracking Adjustment on page 4-14.



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H108\_0278CA

Figure 4-8 Removing the Dryer Drive Pulley

## Removing the Dryer Drive Belt

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the TOP COVER and RECEIVING-END ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

- [1] Remove:
  - Outer AIR TUBES
  - ROLLER ASSEMBLIES
  - Inner AIR TUBES.
- [2] To release the tension on the BELT, remove the SPRING from the TENSION ROLLER ARM. See Figure 4-8 on page 4-9.
- [3] Remove the DRYER DRIVE BELT.
- [4] Install:
  - New DRYER DRIVE BELT
  - SPRING on the TENSION ROLLER ARM
  - Inner AIR TUBES
  - ROLLERS
  - Outer AIR TUBES.
- [5] If the DRYER DRIVE BELT does not remain in the middle of the DRIVE PULLEY, do the Dryer Belt Tracking Adjustment on page 4-14.

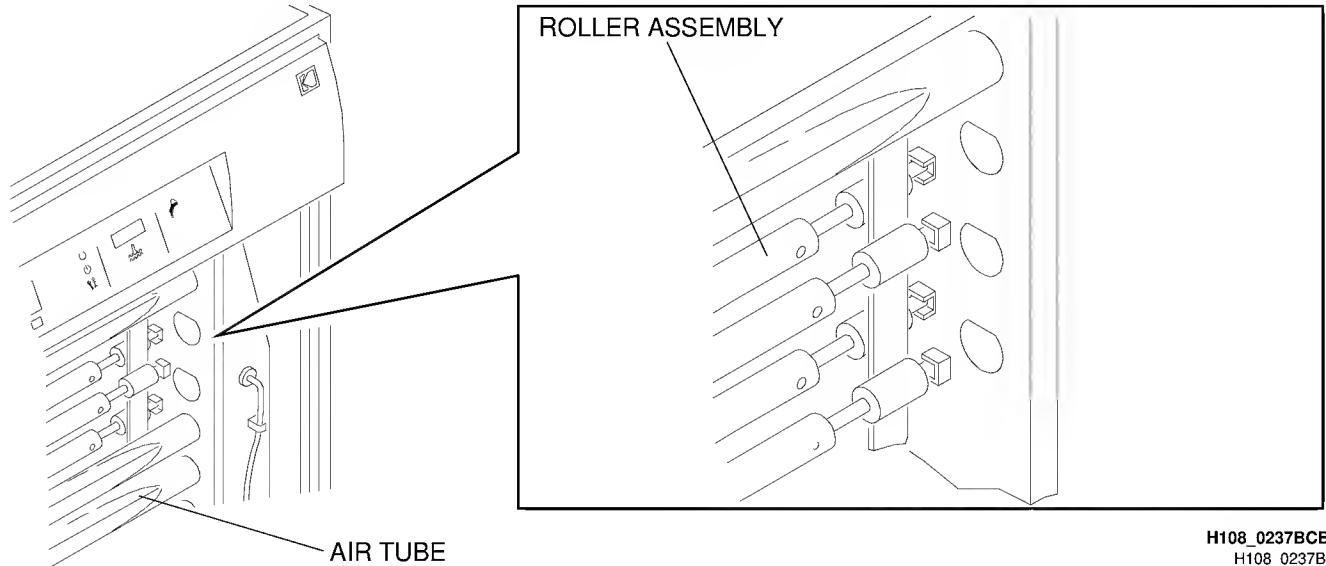


Figure 4-9 Removing Air Tubes and Rollers

## Removing a Dryer Roller Support

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the RECEIVING-END and NON-DRIVE SIDE ACCESS PANELS must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

- [1] To remove a DRYER ROLLER SUPPORT, compress the 2 WINGS and push towards center of the DRYER.
- [2] To install a DRYER ROLLER SUPPORT, snap the ROLLER SUPPORT into the keyed opening in the SIDE PLATE of the NON-DRIVE SIDE.

#### NOTE

The DRIVE-SIDE SUPPORTS can only be installed with the opening toward the BELT. The NON-DRIVE SIDE SUPPORTS can only be installed with the opening toward the top of the processor.

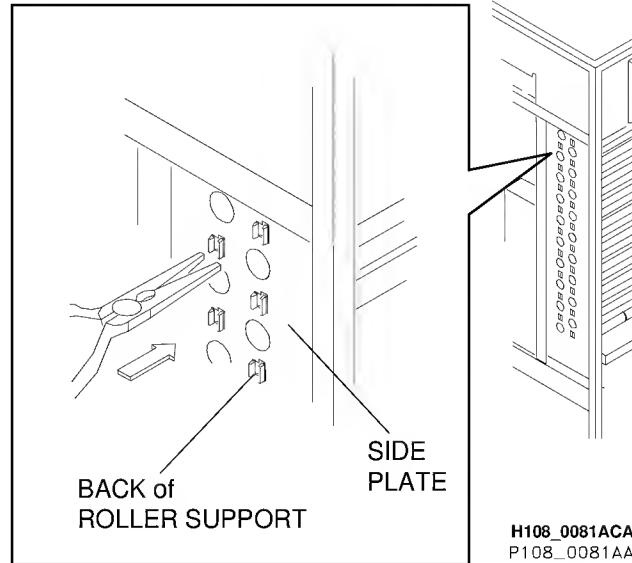


Figure 4-10 Removing a Dryer Roller Support

## Removing the Dryer Heater

### IMPORTANT

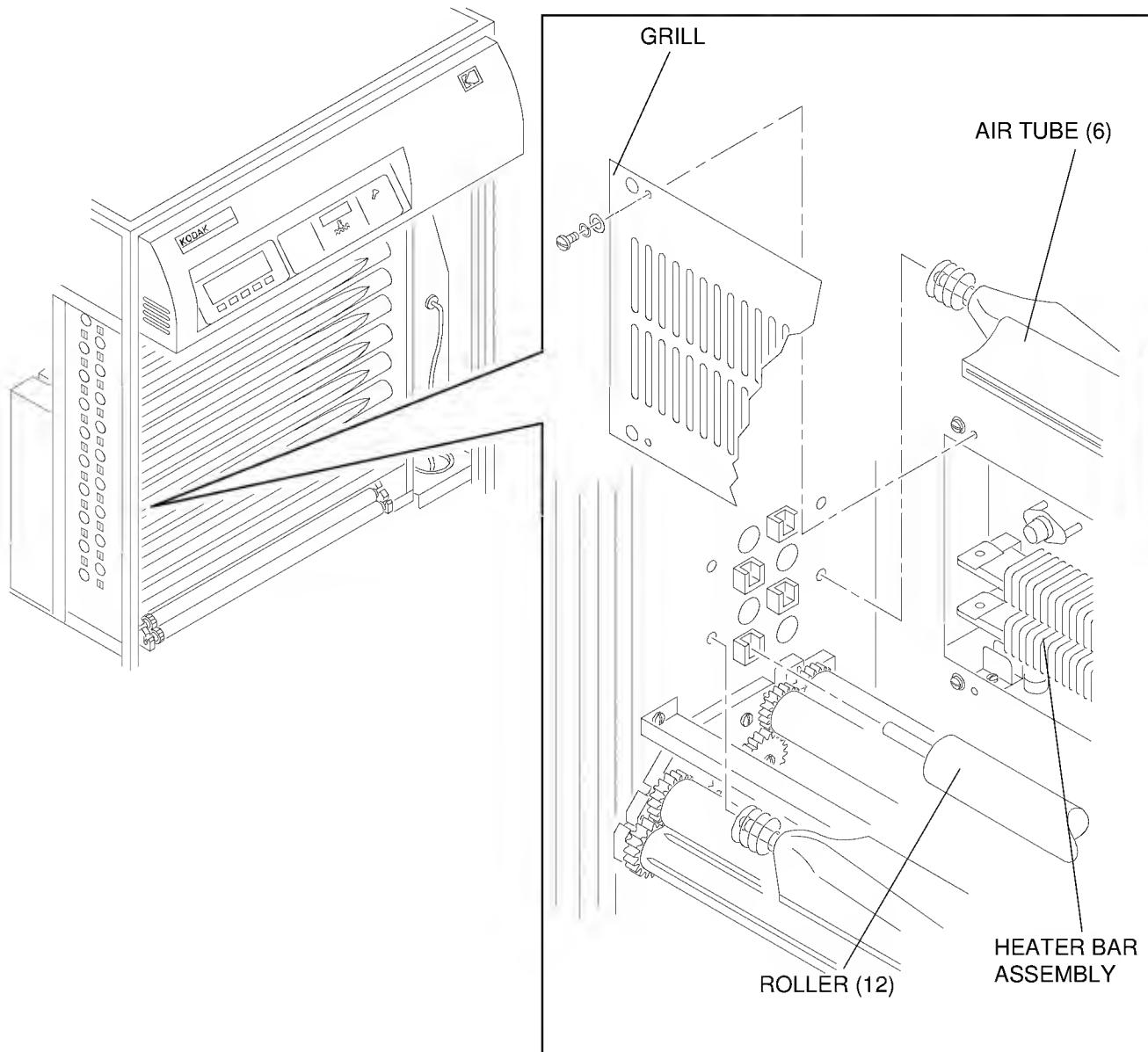
For this procedure the processor must be deenergized, and the RECEIVING-END ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-7 for instructions, if necessary.

- [1] Remove the following. See Figure 4-11.
  - Bottom 6 AIR TUBES
  - Bottom 12 ROLLERS
  - GRILL ASSEMBLY.

- [2] Disconnect the wires from the HEATER BAR.
- [3] Remove the HEATER BAR ASSEMBLY.
- [4] Install a new HEATER BAR ASSEMBLY.
- [5] Connect the wires disconnected in step 2.
- [6] Install the GRILL, ROLLERS, and AIR TUBES.

#### NOTE

The first time the processor is energized, the HEATER will have an odor. This is normal for a new HEATER.



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H108\_0300DA

**Figure 4-11 Removing the Dryer Heater**

## Removing the Dryer Exhaust Fan

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the DRIVE SIDE ACCESS PANEL and the RECEIVING-END ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

- [1] Disconnect CONNECTOR P/J 4.
- [2] Remove the EXHAUST HOSE from the FAN BODY.
- [3] Loosen the 2 SCREWS from the FAN SUPPORT.
- [4] Remove the FAN ASSEMBLY from the processor.
- [5] Install the new FAN ASSEMBLY.
- [6] Install all parts removed in previous steps and make any necessary connections.

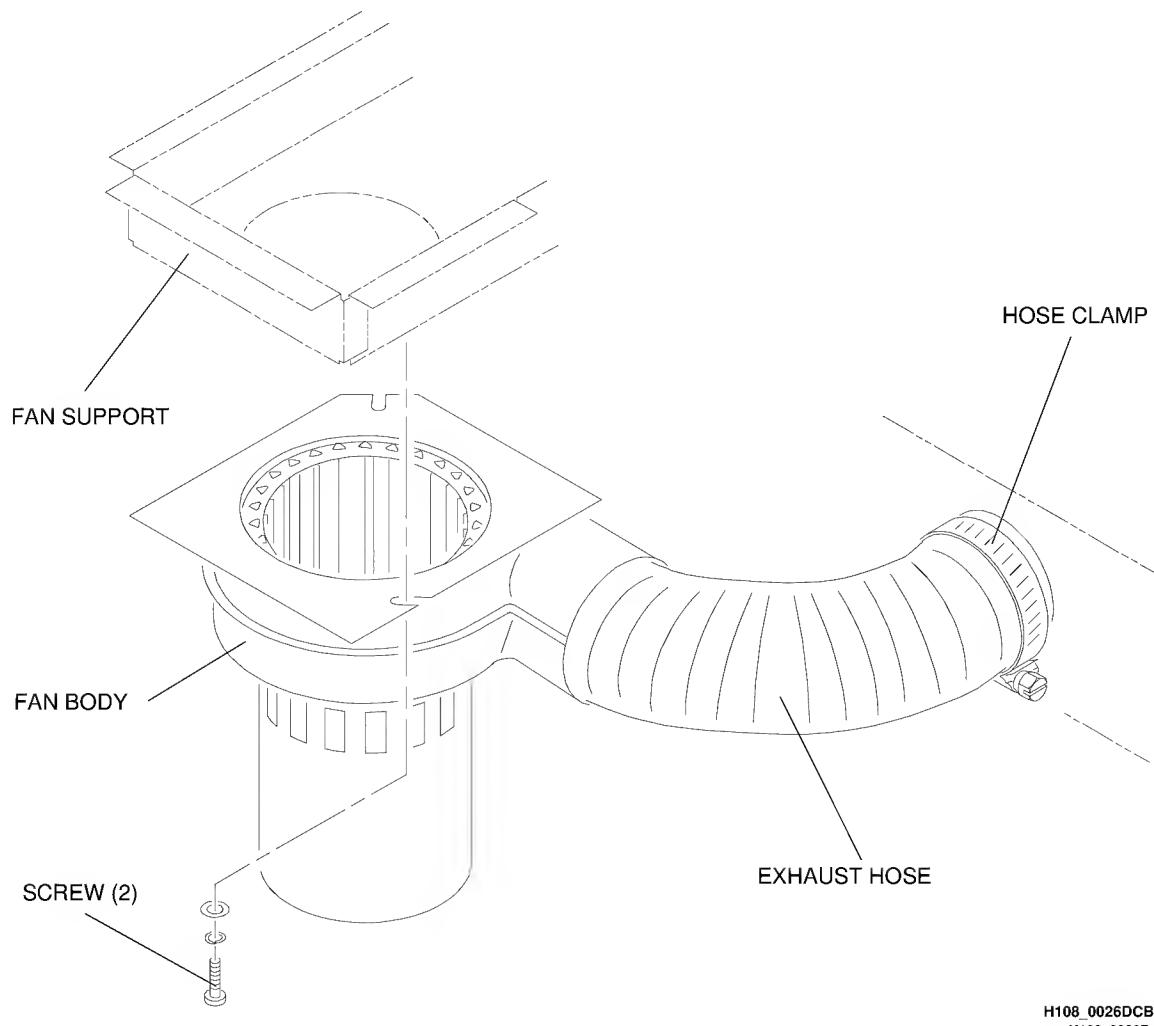


Figure 4-12 Removing the Fan Support Screws

## Adjusting the Dryer Belt Tracking

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the TOP COVER and the RECEIVING-END ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

- [1] Disconnect the WATER HOSE from the FIXER/WASH CROSSOVER.

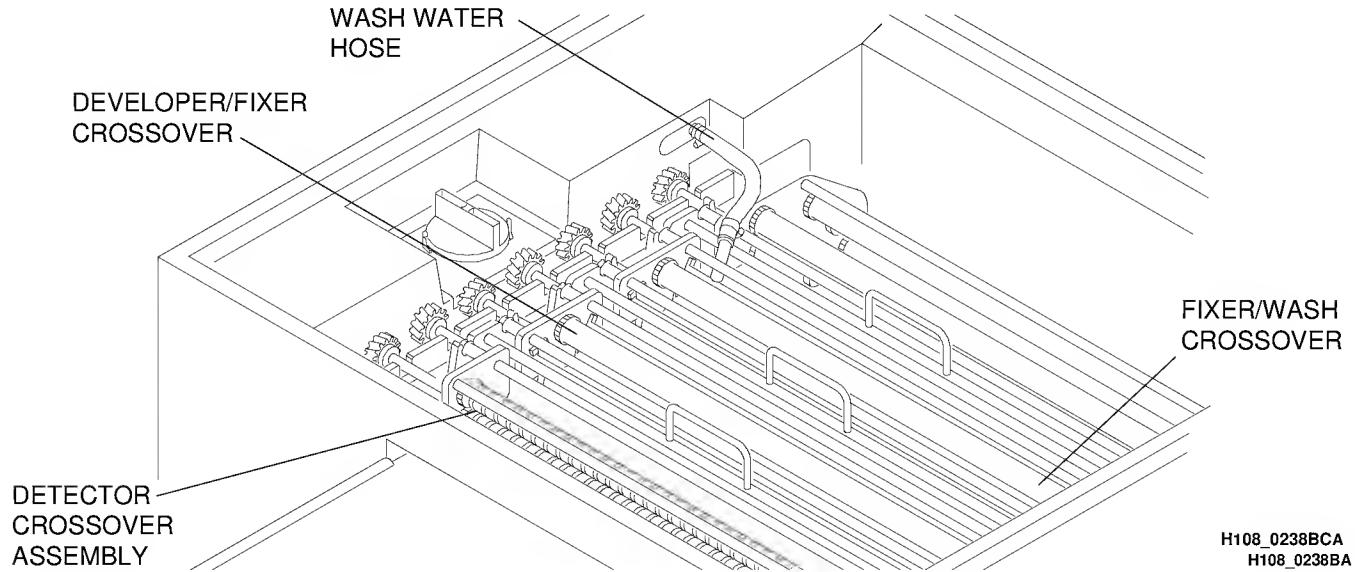


Figure 4-13 Disconnecting the Hose from the Fixer/Wash Crossover

- [2] Remove the FILTER BEZEL and SPLASH GUARD.

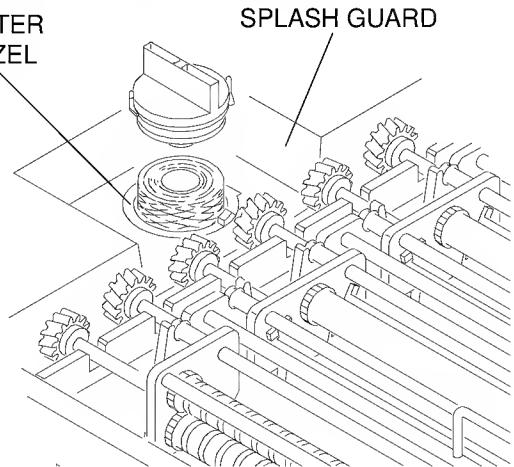
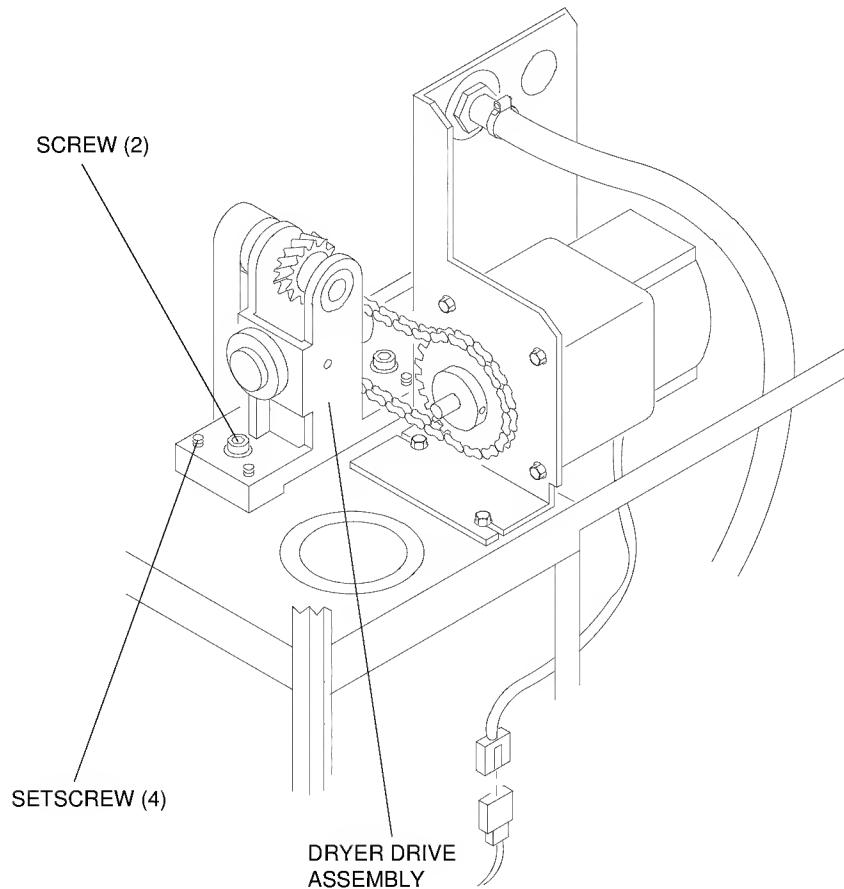


Figure 4-14 Removing the Filter Bezel

- [3] Loosen  $\frac{1}{4}$  rotation the 2 SCREWS that hold the DRYER DRIVE ASSEMBLY.
- [4] Energize the processor by moving the MAIN CIRCUIT BREAKER CB1 to the "I" position.
- [5] See the Operator Manual for the flowchart of menus leading to Diagnostics.
  - a. If you have a PORTABLE COMPUTER, enter the Diagnostics Mode and energize the DRIVE MOTOR.
  - b. If you do not have a PORTABLE COMPUTER, and cannot enter the Diagnostics Mode—
    - Remove the TOP COVER of the processor.
    - Install a JUMPER into CONNECTOR P/J 29.
  - c. Insert a sheet of unprocessed waste film into the FILM DETECTOR ASSEMBLY to activate the transport system.
- [6] Adjust the 4 SETSCREWS in the DRYER DRIVE ASSEMBLY until the DRIVE BELT remains on the center of the DRYER DRIVE ROLLER.

**NOTE**

The DRIVE BELT will track to the higher side of the ROLLER.



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H108\_0240DC

**Figure 4-15 Loosening the Dryer Drive Assembly**

- [7] Wait for the DRYER to reach the correct operating temperature.
- [8] When the DRYER has reached the correct operating temperature, again check that the DRIVE BELT remains on the center of the DRYER DRIVE ROLLER.
- [9] Tighten the 2 SCREWS loosened in step 3.

**IMPORTANT**

Do not tighten the SCREWS too tight.

- [10] Again check that the DRIVE BELT tracks on the center of the DRYER DRIVE ROLLER. If it does not, repeat steps 3, 6, and 9.
- [11] If you are currently in the Diagnostics Mode, exit Diagnostics.
- [12] Remove the JUMPER used in step 5 from CONNECTOR P/J 29.
- [13] Install all parts removed in previous steps.

## **SECTION 5**

### **Plumbing**

#### **IMPORTANT**

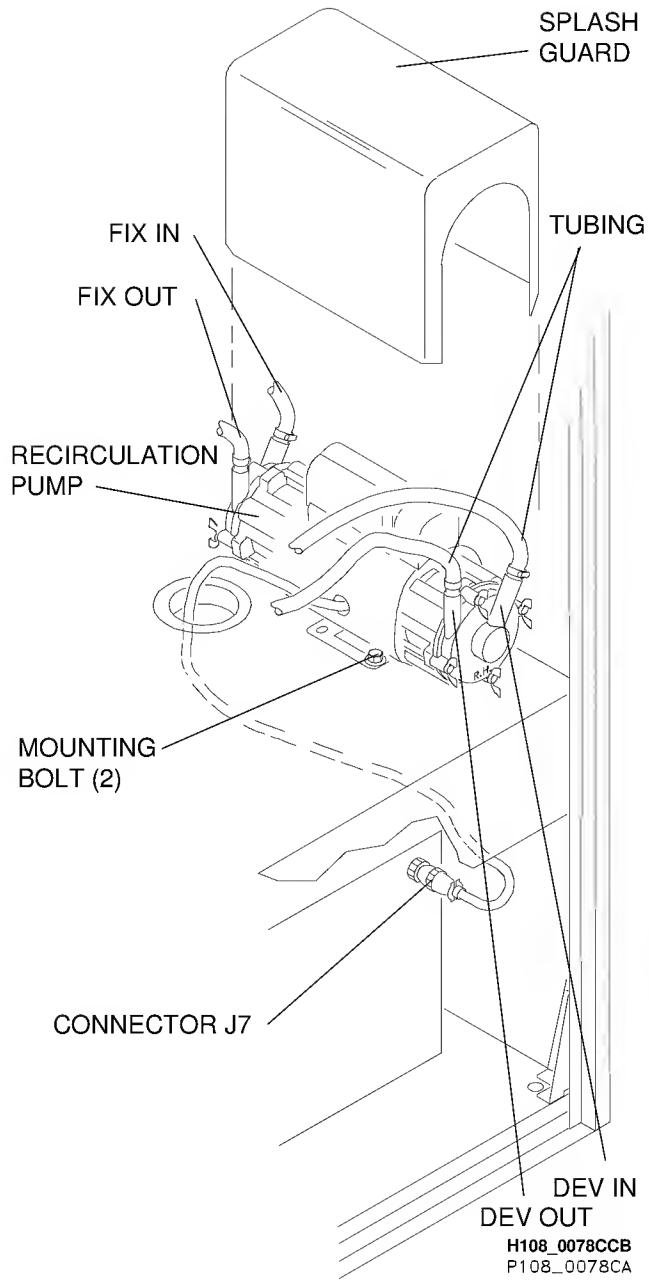
All the procedures in this section require that you deenergize the processor before beginning the first step of the service procedure; and many of the procedures require that you remove the TOP COVER, and the ACCESS PANELS from the processor before beginning the procedure. For more information about how to deenergize the processor, see page 1-7. For more information about how to remove the ACCESS PANELS of the processor, see pages 1-3 through 1-5.

## Removing the Recirculation Pump

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the NON DRIVE SIDE ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

- [1] Disconnect CONNECTOR P/J 7.
- [2] Remove the SPLASH GUARD from over the RECIRCULATION PUMP.
- [3] Place a CLAMP, TL-2170, on each of the 4 RECIRCULATION TUBES to prevent leakage of replenishment solution.
- [4] Disconnect and label the 4 RECIRCULATION TUBES:
  - DEV IN
  - DEV OUT
  - FIX IN
  - FIX OUT
- [5] Remove:
  - 2 MOUNTING BOLTS
  - RECIRCULATION PUMP.
- [6] Install the new RECIRCULATION PUMP.
- [7] Install all parts removed in previous steps.
- [8] Connect:
  - 4 RECIRCULATION TUBES
  - CONNECTOR P/J 7
- [9] Remove the CLAMPS TL-2170.
- [10] Energize the processor.
- [11] To check for recirculation, observe the surface of the solution for movement.



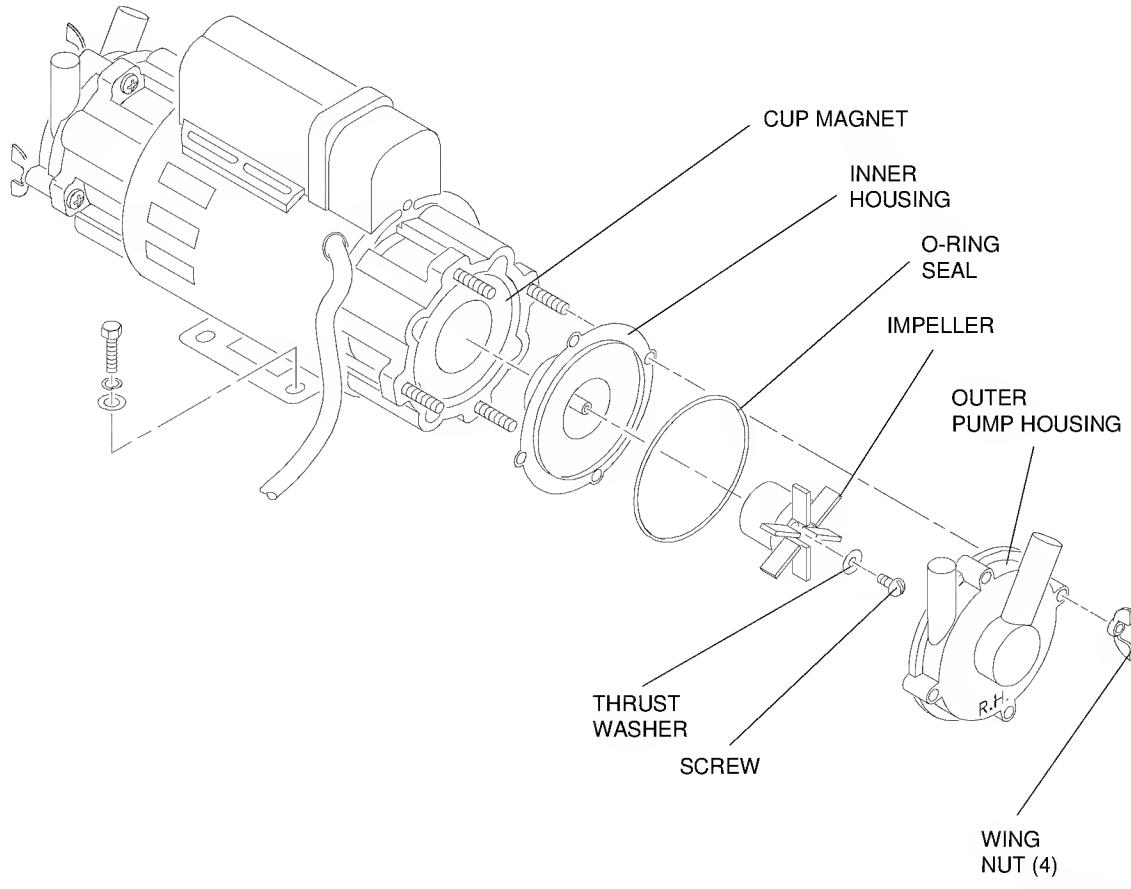
**Figure 5-1 Removing the Recirculation Pump**

## Removing the O-Ring from the Recirculation Pump

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the DRIVE SIDE ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

- [1] Place a CLAMP, TL-2170, on the input and output TUBES of the PUMP to prevent leakage of solution.
- [2] Remove:
  - 4 WING NUTS
  - OUTER PUMP HOUSING
  - O-RING SEAL.
- [3] Install a new O-RING SEAL.
- [4] Install all parts removed in previous steps.
- [5] Remove the CLAMP from each of the TUBES.



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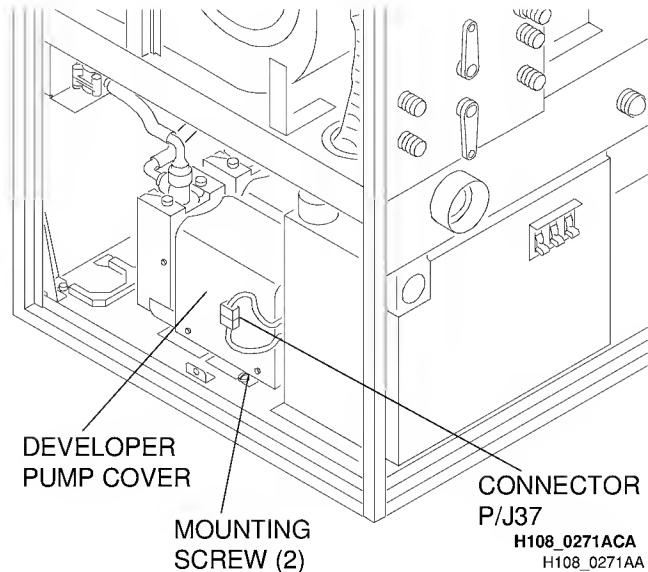
Figure 5-2 Removing the O-Ring Seal

## Removing the Replenisher Pumps

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the DRIVE SIDE ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

- [1] Install CLAMP, TL-2170, onto both of the REPLENISHMENT TUBES to prevent leakage.
- [2] Disconnect either CONNECTOR P/J 37 located at the back of the DEVELOPER PUMP COVER, or CONNECTOR P/J 38 located at the back of the FIXER PUMP COVER.
- [3] Remove:
  - 2 MOUNTING SCREWS
  - REPLENISHER PUMP.
- [4] If necessary, install new parts or, install a new REPLENISHER PUMP. See Figure 5-4 on page 5-5 for the location of parts.
- [5] Install all parts removed in previous steps and make any necessary connections.
- [6] Remove the CLAMP TL-2170 from each of the REPLENISHMENT TUBES.
- [7] Check the replenishment rates. See the Operator Manual.



**Figure 5-3 Disconnecting Connectors  
P/J 37 and P/J 38**

## IMPORTANT

Make sure you install the SPRING correctly. If you do not, the replenishment system rates and calibration will not be correct.

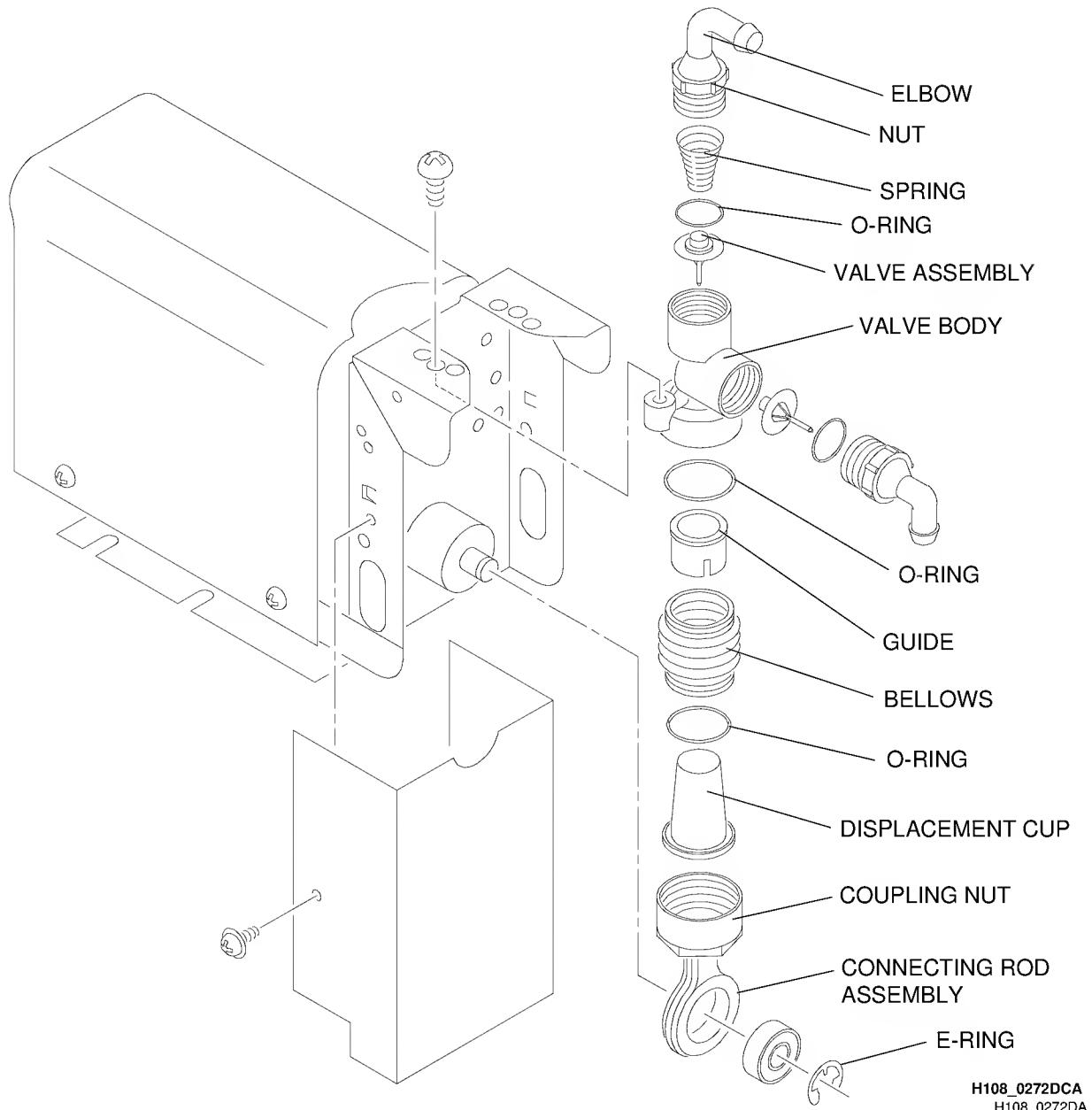


Figure 5-4 Assembling a Replenisher Pump

## Removing the Developer or Fixer Heater

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the FEED-END, MIDDLE and the DRIVE SIDE ACCESS PANELS must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

- [1] Either—
  - (a) Drain the DEVELOPER and/or FIXER TANK by opening the DEVELOPER and/or FIXER DRAIN VALVES on the FEED END of the processor or,
  - (b) Place CLAMP TL-2170 on the DEVELOPER or FIXER TUBES leading to and from the THERMOWELL.
- [2] Disconnect DEVELOPER HEATER CONNECTOR P8 or FIXER HEATER CONNECTOR P6 from the ELECTRICAL BOX.

**CAUTION**

A small amount of DEVELOPER or FIXER will spill.

- [3] Remove the HEATER from the THERMOWELL.
- [4] Check that the HEATER LOCATOR is positioned in the THERMOWELL 13.9 cm (5.5 in.) from the end opposite the HEATER.

**CAUTION**

Overtightening of the HEATER may cause damage to the THERMOWELL.

- [5] To install the new HEATER, use SILASTIC SEALANT RTV 102 TL-3230 or equivalent. Tighten by hand plus 1/2 turn.
- [6] Make the necessary connections.
- [7] Remove CLAMPS TL-2170.

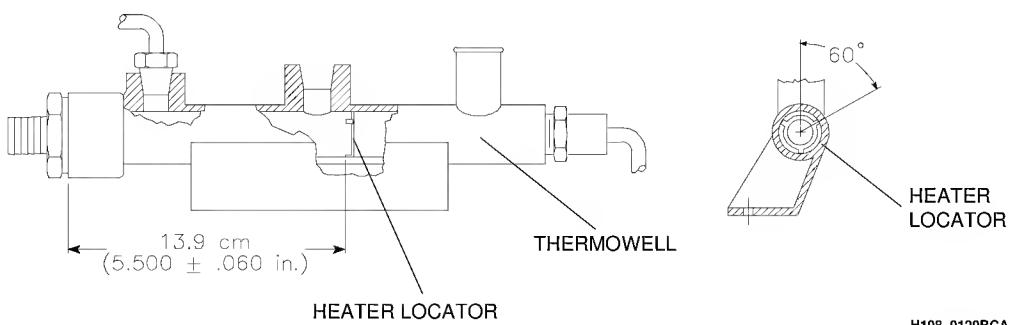


Figure 5-5 Checking Heater Locator Positioning

## Removing the Developer or Fixer Thermistor

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the FEED-END MIDDLE ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

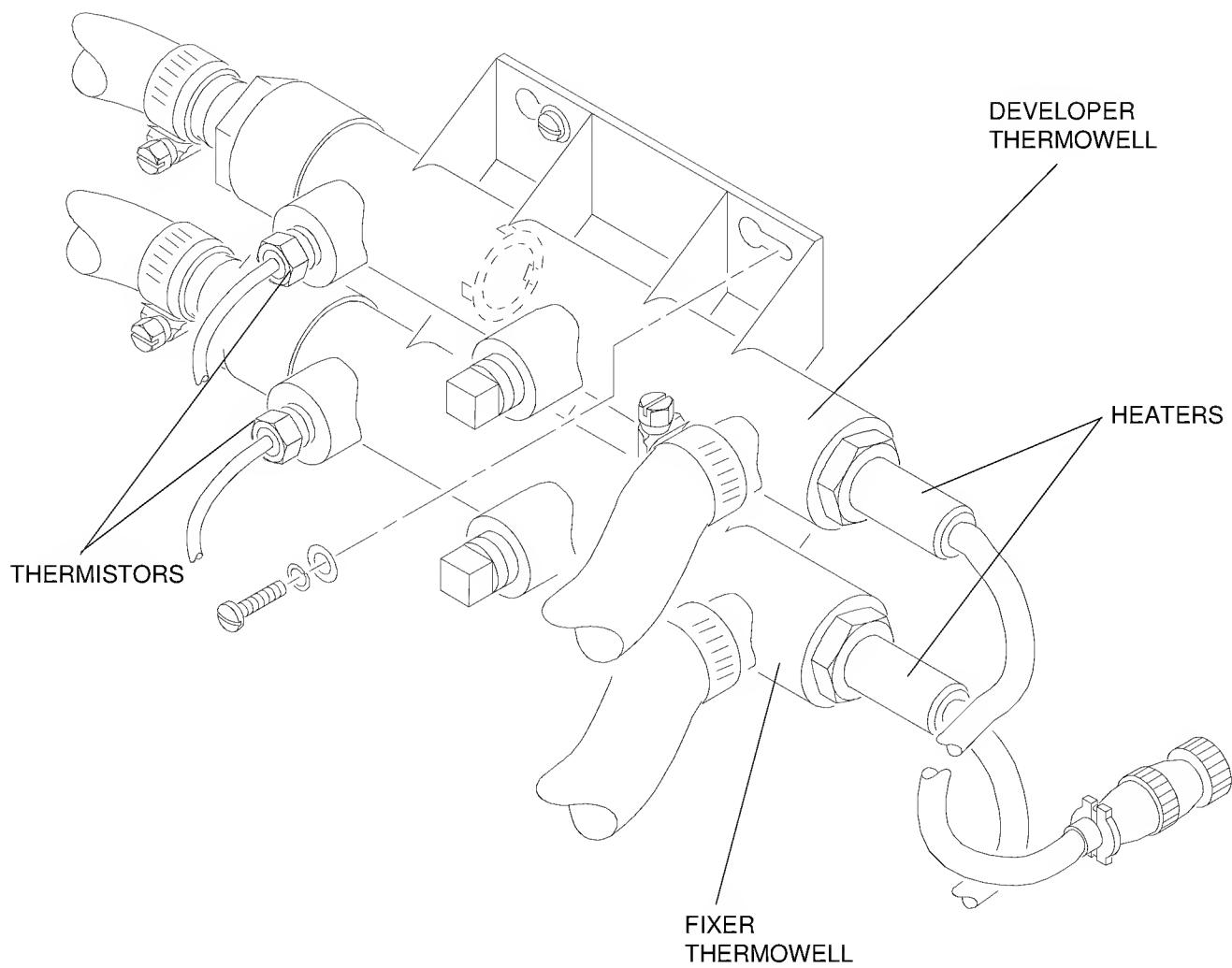
- [1] Either drain the DEVELOPER and/or FIXER TANK, or place CLAMPS TL-2170 on the DEVELOPER or FIXER TUBES leading to and from the THERMOWELL.
- [2] Disconnect the DEVELOPER THERMISTOR P12 or the FIXER THERMISTOR P13 from the ELECTRICAL BOX. See Figure 5-6 on page 5-8.
- [3] Remove the THERMISTOR from the THERMOWELL.



### CAUTION

- A small amount of DEVELOPER or FIXER will spill.
- To prevent cracking of the THERMOWELL BODY, use caution when assembling the THERMISTOR and tighten by hand plus 1/2 turn.

- [4] To install the new THERMISTOR, use SILASTIC SEALANT RTV 102 TL-3230 or equivalent.
- [5] Make the necessary connections.



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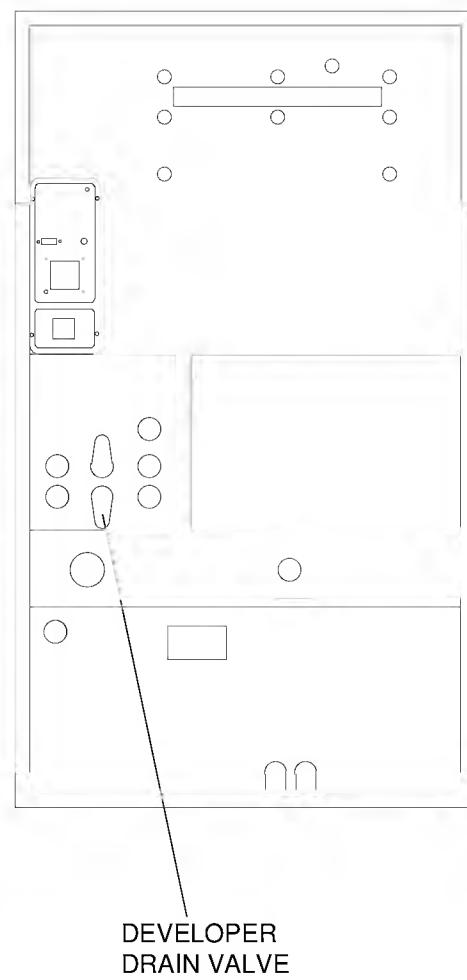
**Figure 5-6 Installing Thermistors**

## Removing the Developer Filter Canister

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the TOP COVER must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

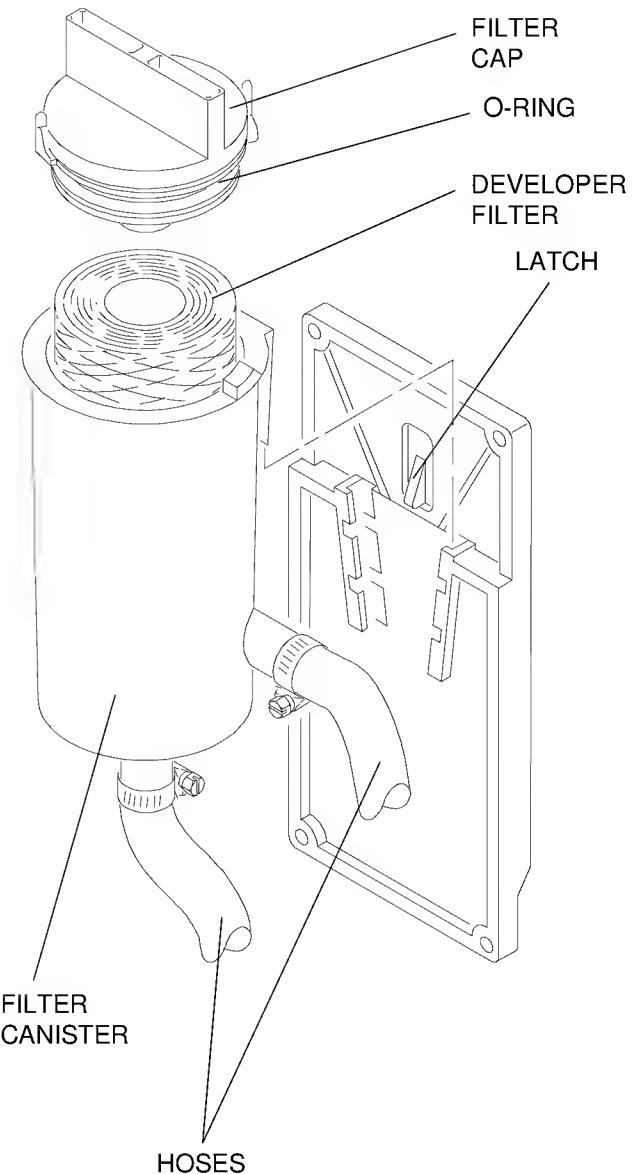
- [1] Drain the DEVELOPER TANK by opening the DEVELOPER DRAIN VALVE on the FEED END of the processor.



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Figure 5-7 Opening the Developer Drain Valve

- [2] Remove:
  - FILTER CAP
  - DEVELOPER FILTER.
- [3] Disconnect the 2 HOSES from the FILTER CANISTER.
- [4] Push the LATCH and lift the FILTER CANISTER out of the processor.
- [5] Install the new FILTER CANISTER.
- [6] Connect the 2 HOSES to the FILTER CANISTER.
- [7] Install the new DEVELOPER FILTER and FILTER CAP.
- [8] Check that the O-RING is not worn and is seated correctly.



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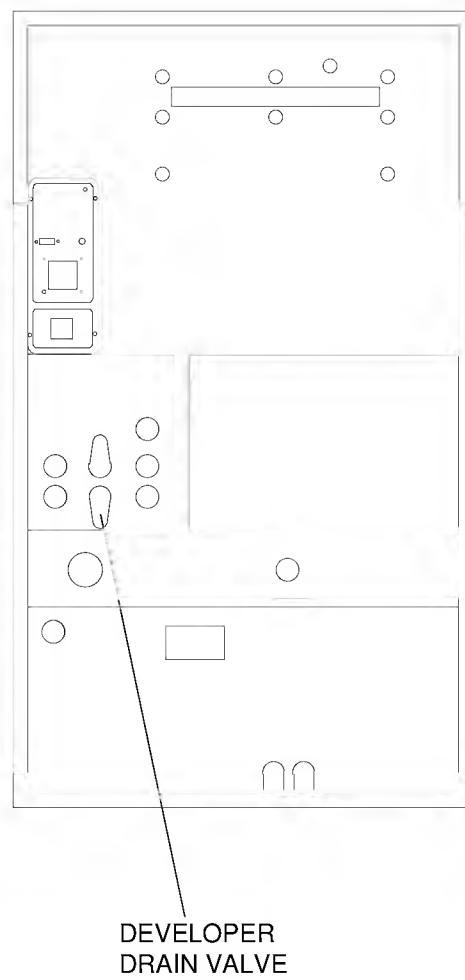
**Figure 5-8 Removing the Developer Filter Canister**

## Removing the Developer Heat Exchanger

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the TOP COVER and both SIDE ACCESS PANELS must be removed from the processor. See page 1-3 through 1-5 for instructions, if necessary. Also make sure that the water supply to the processor is shut off for this procedure.

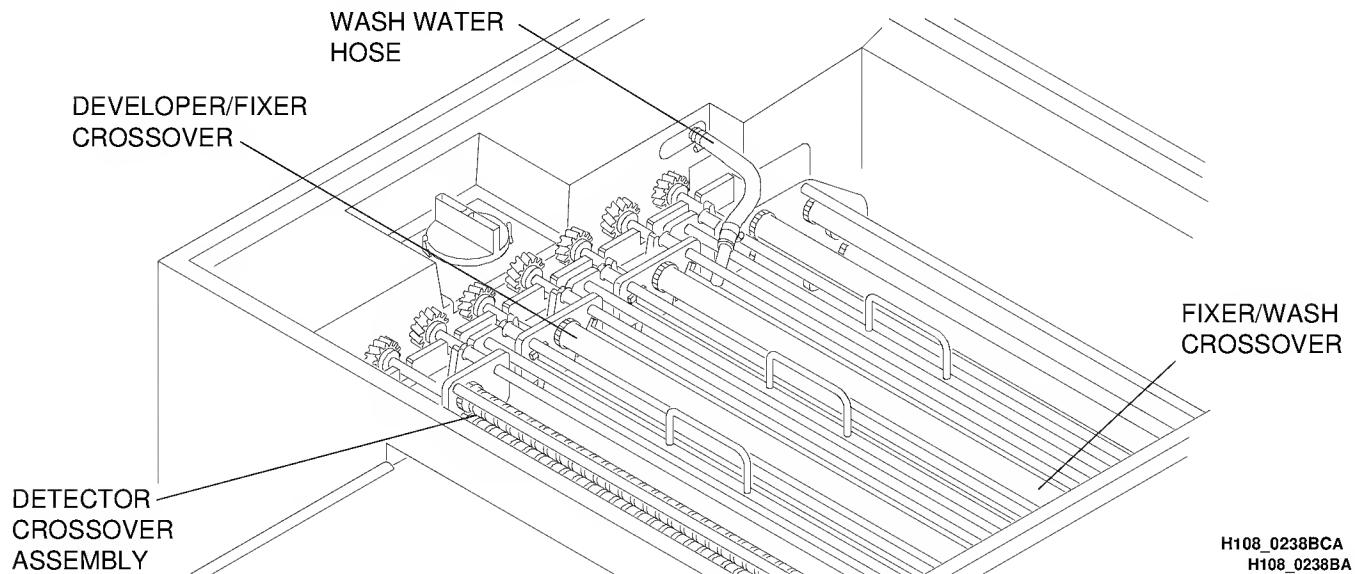
- [1] Drain the DEVELOPER TANK by opening the DEVELOPER DRAIN VALVE on the FEED END of the processor.



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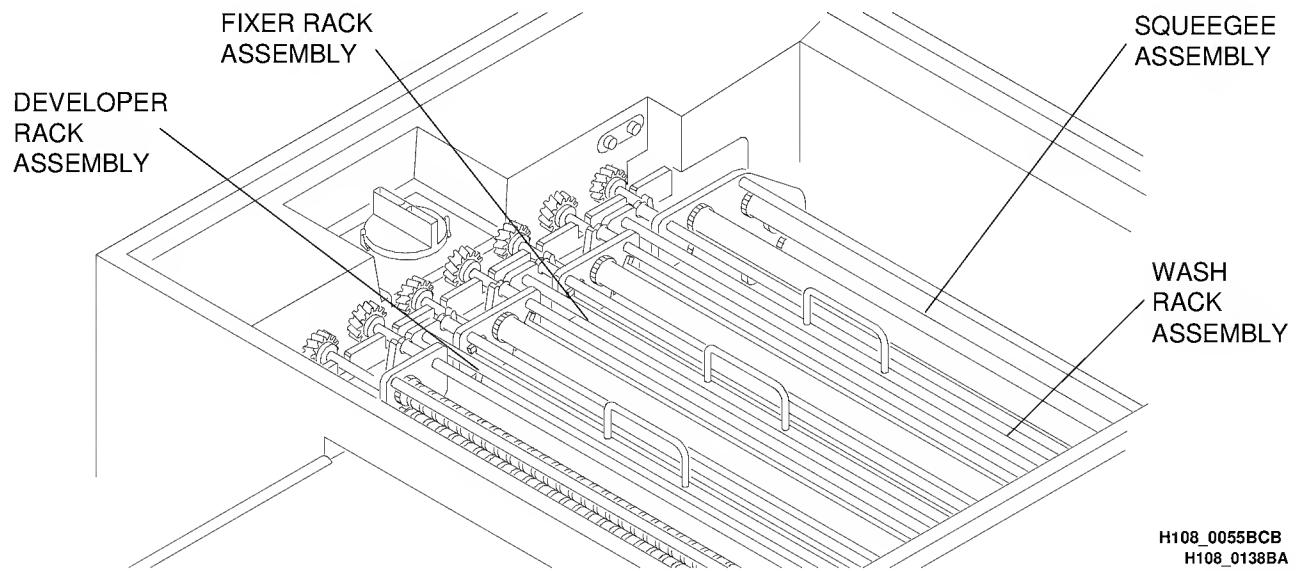
Figure 5-9 Opening the Drain Valve

- [2] Remove the DETECTOR CROSSOVER ASSEMBLY from the processor.



**Figure 5-10 Removing Crossovers and Disconnecting the Water Hose**

- [3] Disconnect the WASH WATER HOSE from the QUICK DISCONNECT.
- [4] Remove the DEVELOPER/FIXER CROSSOVER ASSEMBLY.
- [5] Remove the DEVELOPER RACK. Use the RACK DRIP TRAY to prevent contamination of the other solutions.



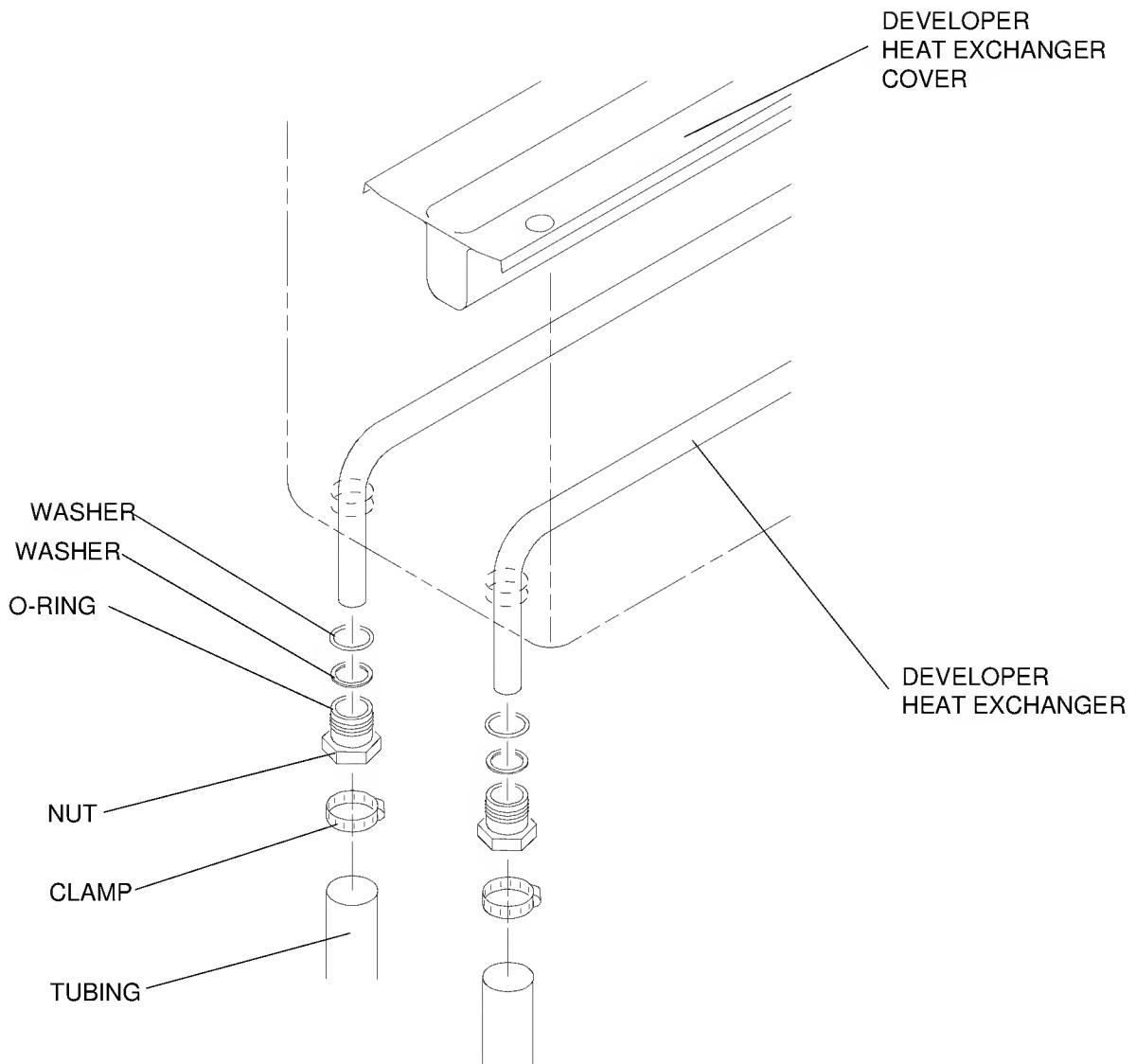
**Figure 5-11 Removing the Developer Rack**

- [6] Remove the DEVELOPER HEAT EXCHANGER COVER from the bottom of the DEVELOPER TANK.



Some spills of water and developer might occur. Prevent damage to the MOTORS and electrical connections.

- [7] Loosen the 2 CLAMPS securing the TUBING to the HEAT EXCHANGER. Remove the TUBING.
- [8] Remove the 2 NUTS from the DEVELOPER HEAT EXCHANGER. Keep the O-RINGS and WASHERS for reassembly.
- [9] Remove the DEVELOPER HEAT EXCHANGER from the DEVELOPER TANK.
- [10] Install the new DEVELOPER HEAT EXCHANGER into the DEVELOPER TANK.
- [11] Install all parts removed in previous steps and make the necessary connections.



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H108\_0147DA

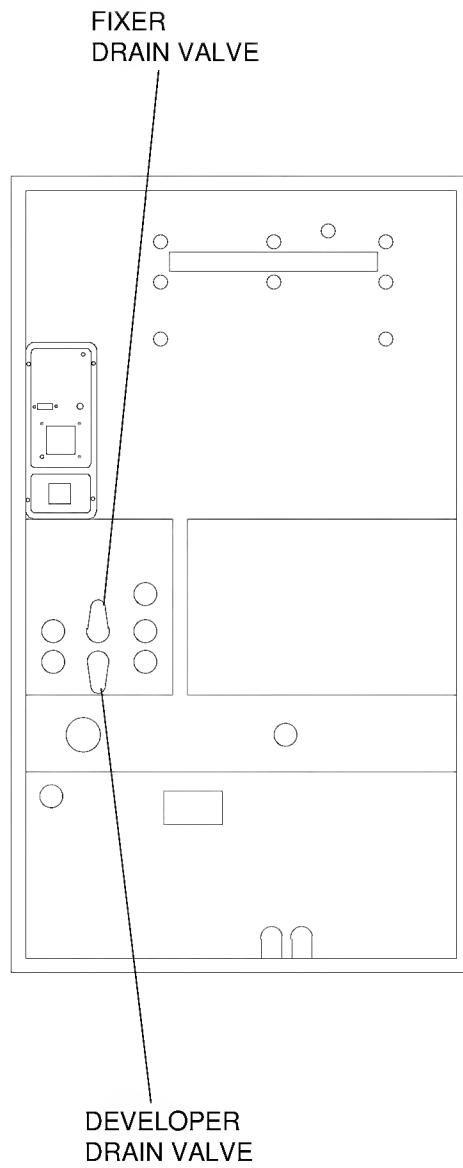
**Figure 5-12 Removing the Developer Heat Exchanger**

## Removing the Tank Assembly

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the TOP COVER, both SIDE ACCESS PANELS, and the FEED-END, LOWER ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary. Also make sure that the water supply to the processor is shut off for this procedure.

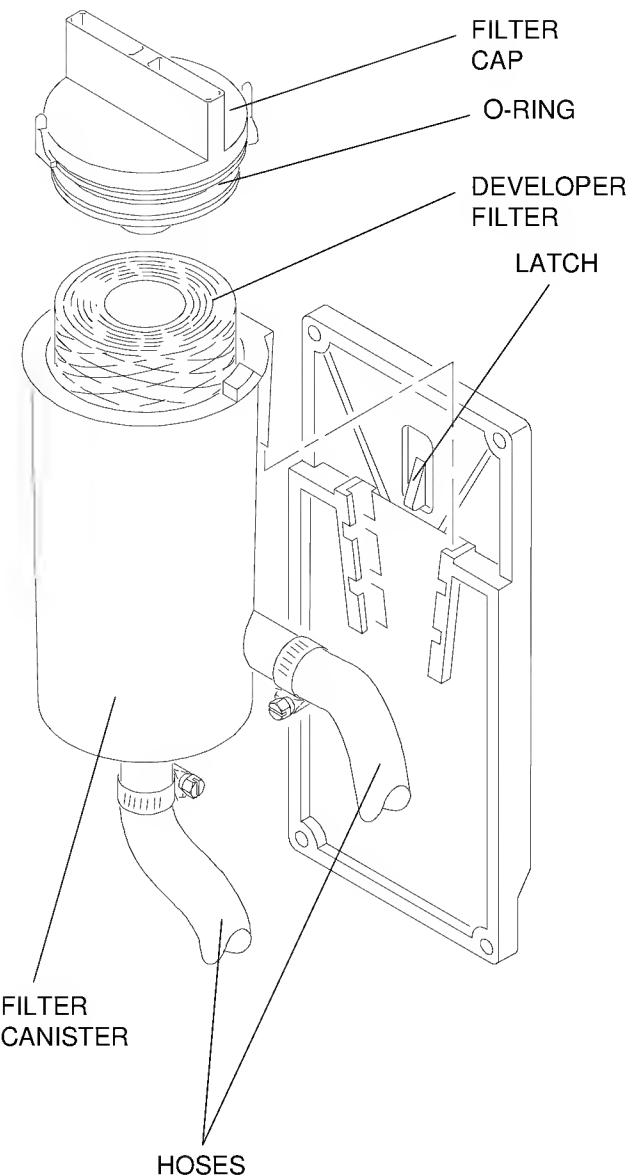
- [1] Drain the DEVELOPER and FIXER TANKS by opening the DEVELOPER and FIXER DRAIN VALVES on the FEED END of the processor.



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H108\_0004CA

**Figure 5-13 Opening the Developer and Fixer Drain Valve**

- [2] Remove the FILTER BEZEL and SPLASH GUARD from the processor.
- [3] Remove all RACKS and CROSSOVERS from the processor.
- [4] Remove the FILTER CANISTER:
  - (a) Disconnect the 2 HOSES from the FILTER CANISTER.
  - (b) Push the LATCH and lift the FILTER CANISTER out of the processor.

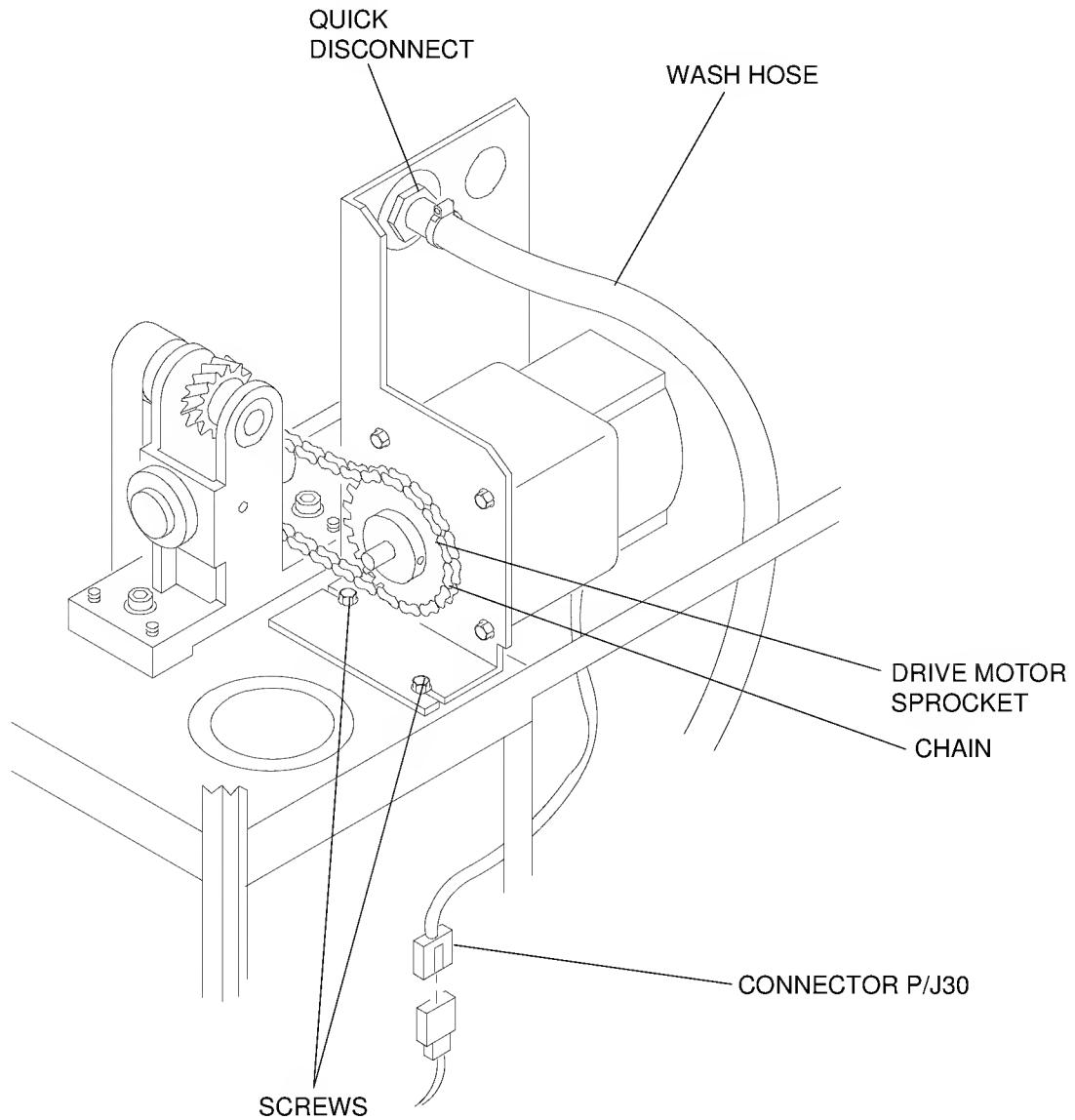


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H108\_0243CA

**Figure 5-14 Removing the Filter Canister**

[5] Do the following to remove the DRIVE MOTOR and BRACKET ASSEMBLY:

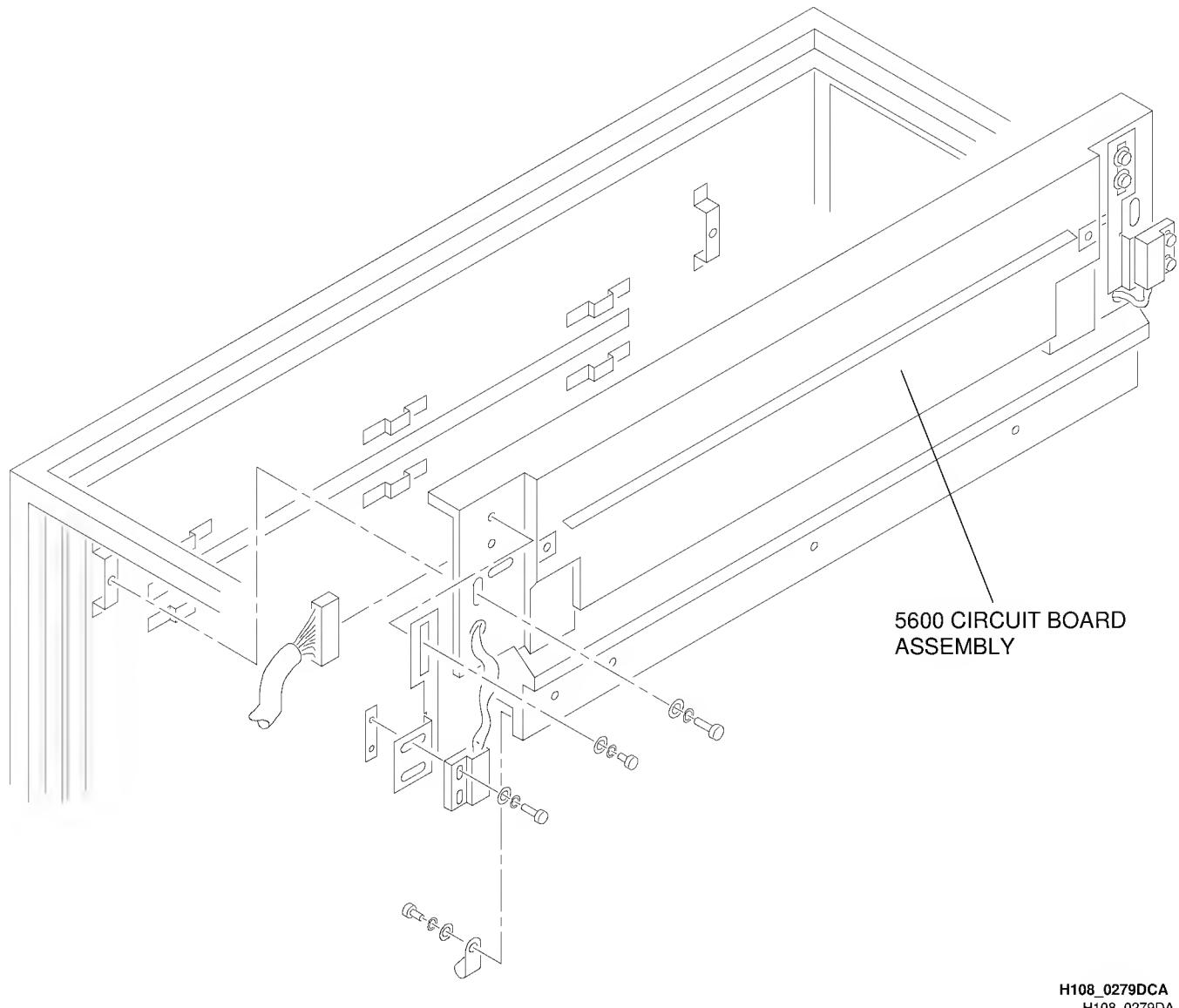
- a. Loosen the 2 SCREWS.
- b. Disconnect the CONNECTOR P/J 30.
- c. Remove the CHAIN from the DRIVE MOTOR SPROCKET.
- d. Remove the WASH HOSE from the QUICK DISCONNECT.



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H108\_0240DC

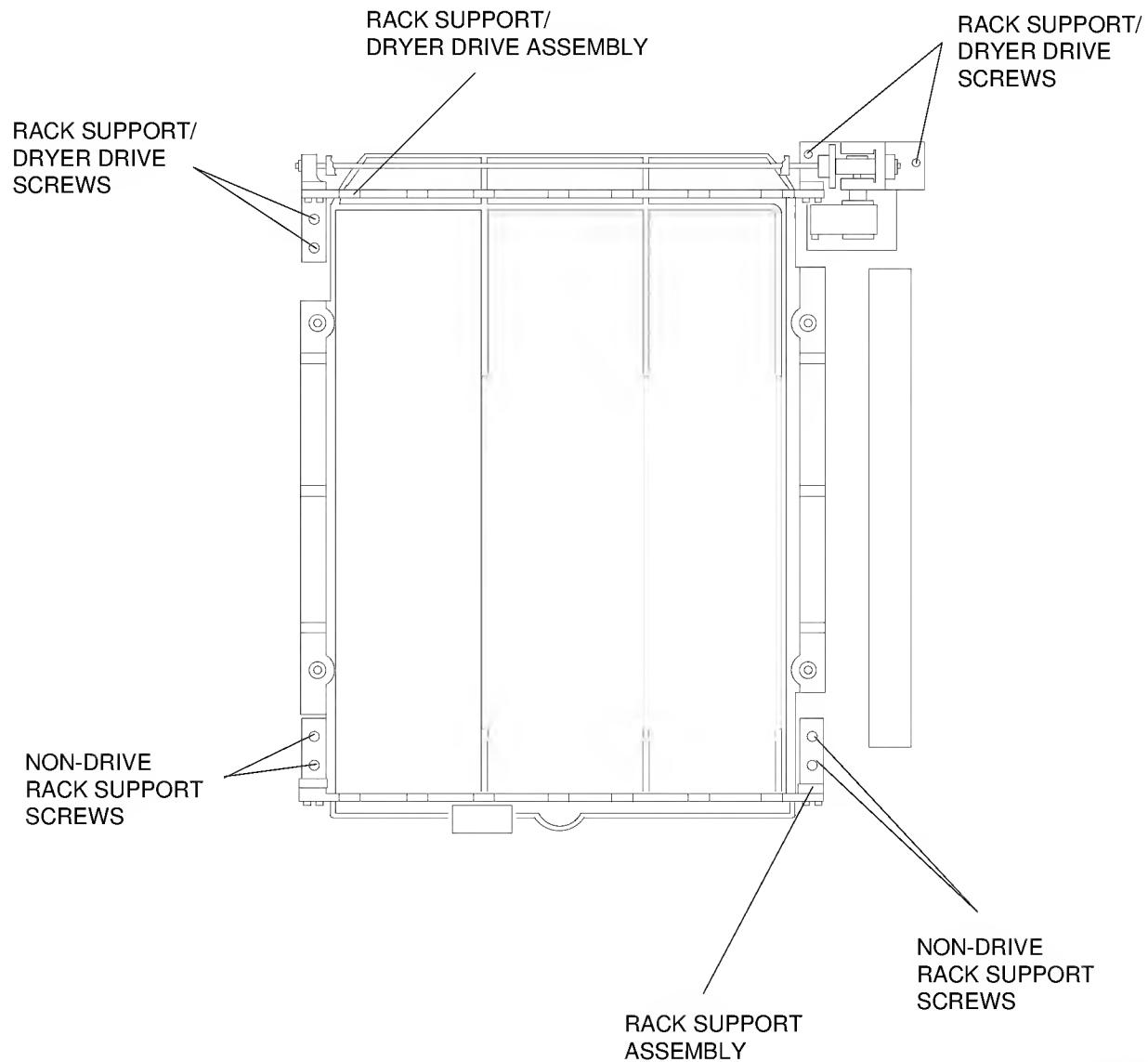
**Figure 5-15 Removing the Drive Motor**

- [6] Remove the 5600 CIRCUIT BOARD ASSEMBLY.



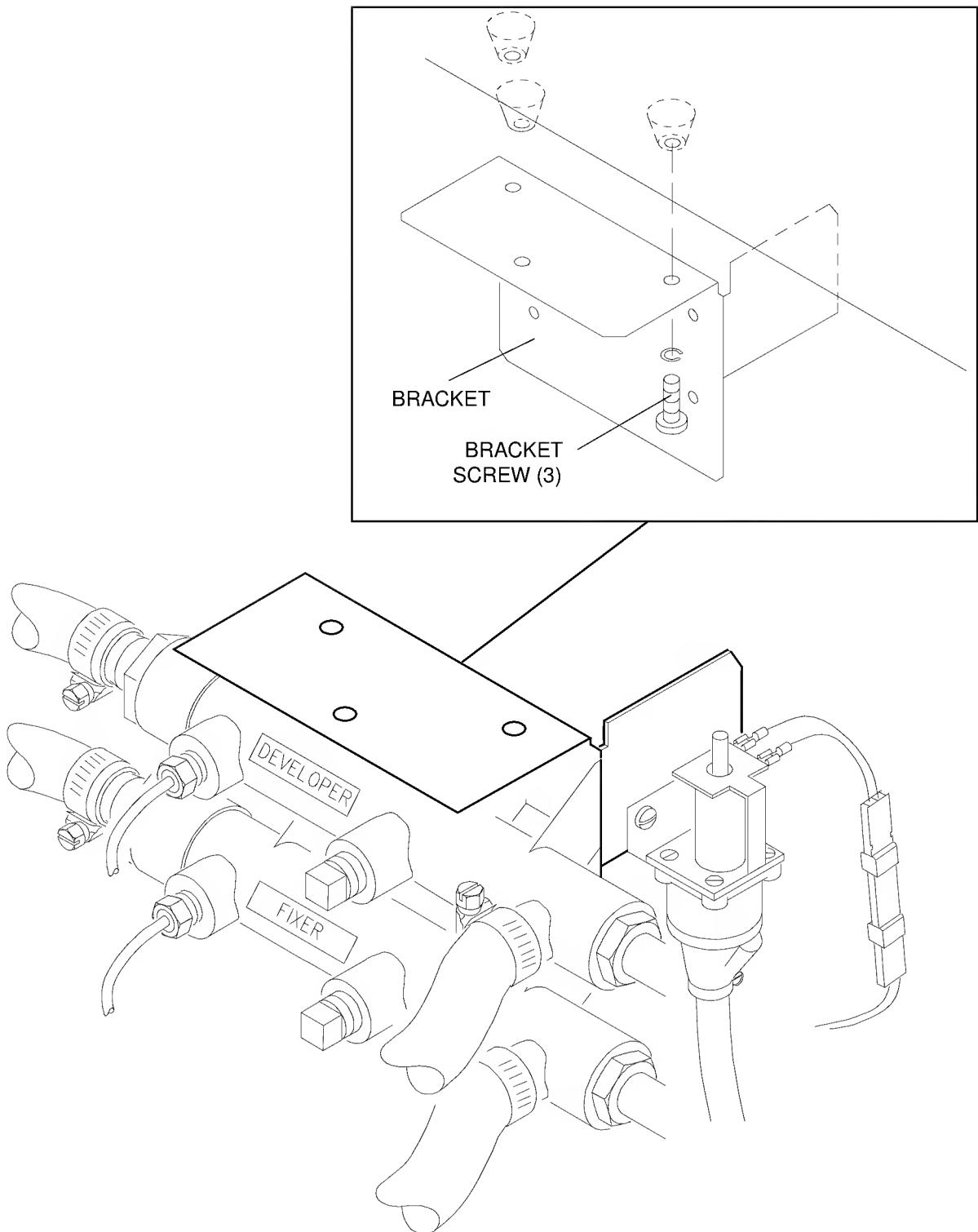
**Figure 5-16 Removing the 5600 Circuit Board Assembly**

- [7] Remove:
  - 4 RACK SUPPORT/DRYER DRIVE SCREWS
  - RACK SUPPORT/DRYER DRIVE ASSEMBLY
  - 4 NON-DRIVE RACK SUPPORT SCREWS
  - RACK SUPPORT ASSEMBLY.
- [8] Remove the 3 BRACKET SCREWS supporting the THERMOWELLS. See Figure 5-18.
- [9] Move the THERMOWELLS to access and remove the 3 SCREWS securing the BRACKET to the bottom of the DEVELOPER TANK.



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H108\_0259DC

Figure 5-17 Removing the Rack Supports — Top View



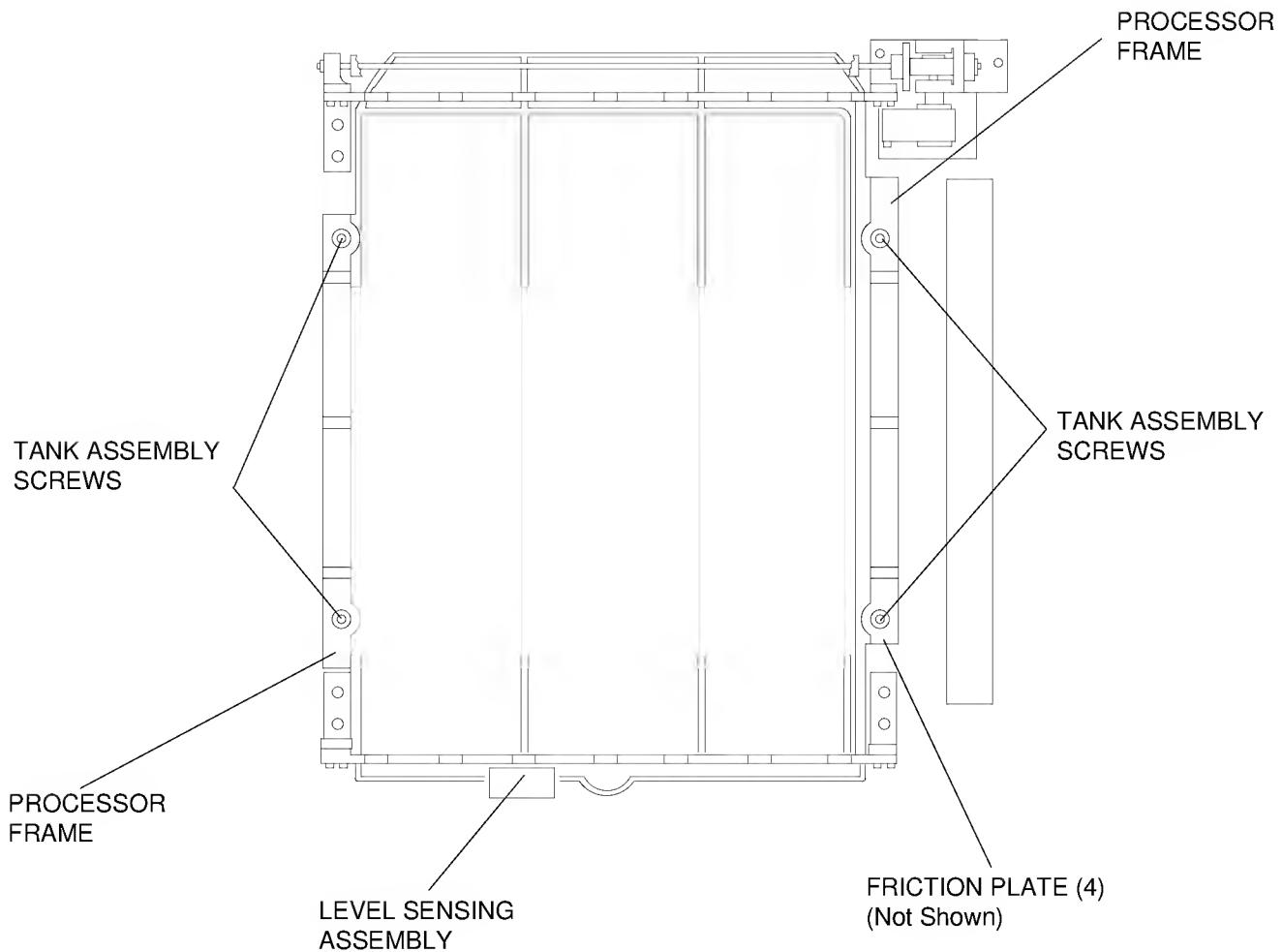
H108\_0157ECD  
H108\_0157EA

**Figure 5-18 Removing the Developer Tank Bracket**

#### **NOTE**

- After draining the TANKS, small amounts of solution will remain in the plumbing system. Be prepared to wipe up any spills.
- While doing steps 10, 11, and 12, place a mark on each TUBE as you remove the TUBE from the TANK so that you can identify the TUBES for assembly.

- [10] Remove DRAIN TUBING from the WASH TANK.
- [11] Remove all TUBING connected to the sides and bottom of the FIXER TANK.
- [12] Remove all TUBING connected to the sides and bottom of the DEVELOPER TANK.
- [13] Remove all TUBING connected to the sides and bottom of the WASH TANK.
- [14] Remove the 4 HEX SOCKET SCREWS securing the TANK ASSEMBLY to the processor FRAME.



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H108\_0259DC

**Figure 5-19 Removing the Tank Assembly — Top View**

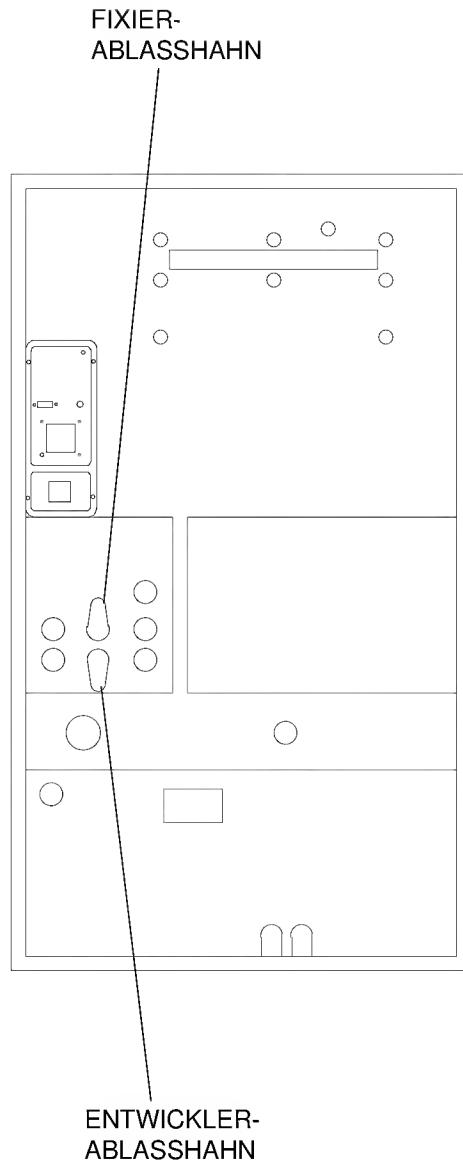
- [15] Remove the LEVEL SENSING ASSEMBLY.
- [16] Lift the TANK ASSEMBLY out of the PROCESSOR FRAME.
- [17] Keep the 4 FRICTION PLATES for assembly of the new TANK ASSEMBLY.
- [18] Install the new TANK ASSEMBLY.
- [19] Install all parts removed in previous steps and connect the WATER HOSE.

## Removing the Developer and Fixer Drain Valves

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the TOP COVER, both SIDE ACCESS PANELS, and the FEED-END, MIDDLE ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary. Also make sure that the water supply to the processor is shut off for this procedure.

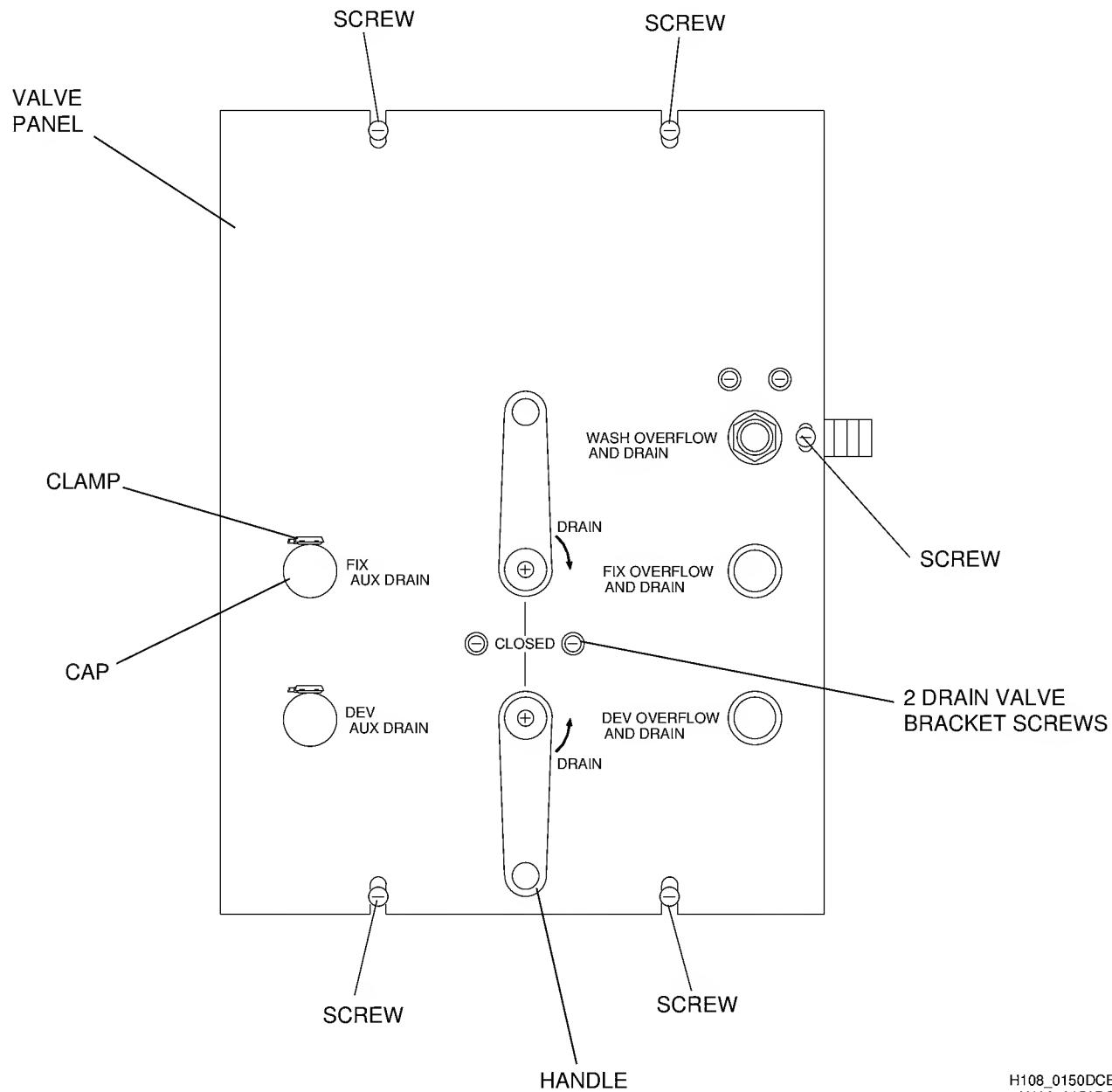
- [1] Drain the DEVELOPER and FIXER TANKS by opening the DEVELOPER and FIXER DRAIN VALVES on the FEED END of the processor.



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H108\_0004CA

**Figure 5-20 Opening the Developer and Fixer Drain Valves**

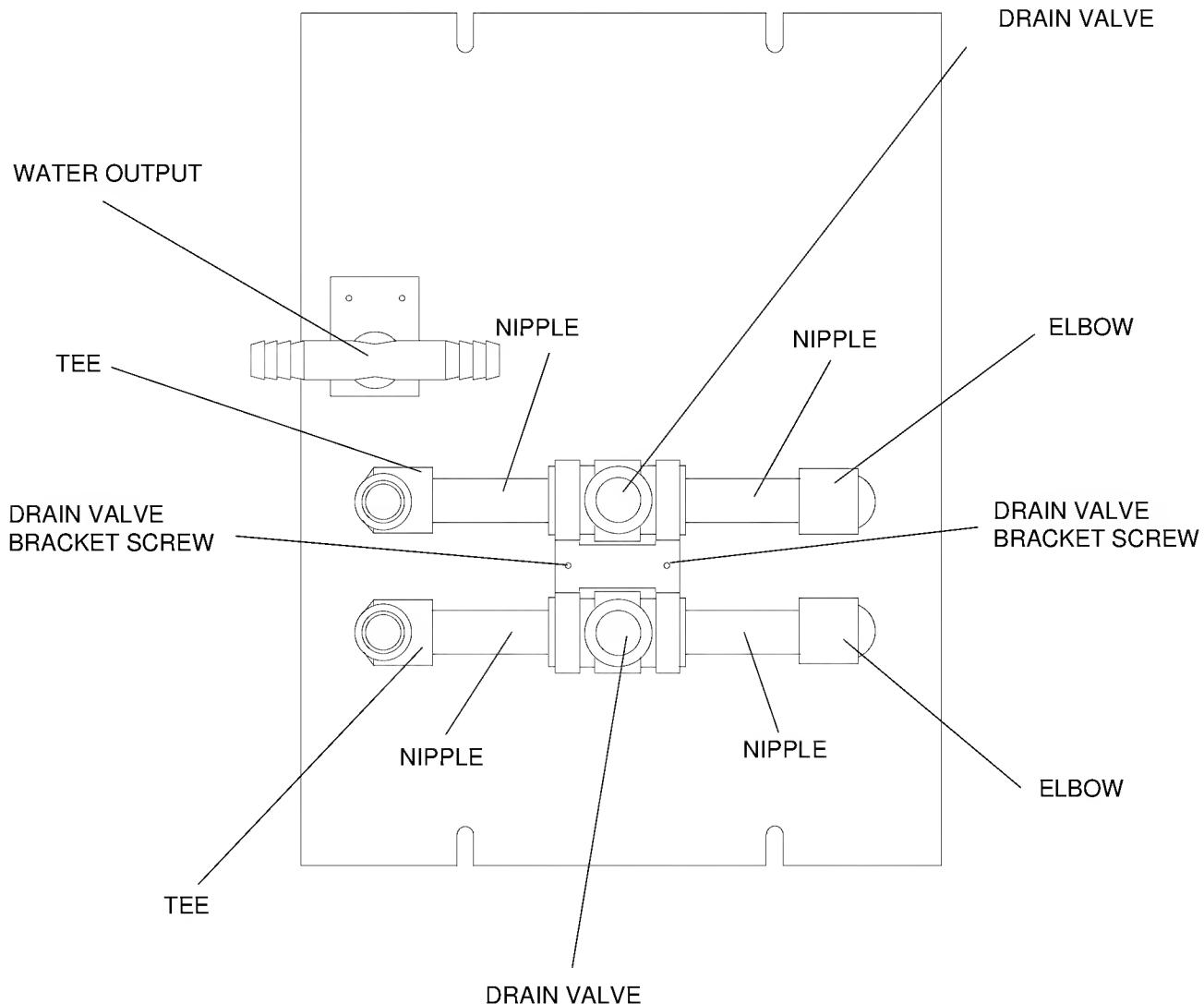
- [2] Remove the HANDLE from the DEVELOPER or FIXER DRAIN VALVE ASSEMBLY.
- [3] Remove the CLAMP and CAP from the DEVELOPER or FIXER AUXILIARY DRAIN.
- [4] Remove the 5 SCREWS from the DRAIN PANEL.
- [5] Pull the DRAIN PANEL away from the processor FRAME enough to access the HOSE CLAMPS with a screwdriver.
- [6] Loosen the 3 HOSE CLAMPS on the DRAIN VALVE ASSEMBLY.
- [7] Remove the 3 HOSES from the DRAIN VALVE ASSEMBLY.
- [8] Remove the 2 DRAIN VALVE BRACKET SCREWS.



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H108\_0150DC

Figure 5-21 Removing the Drain Panel Screws

- [9] Remove the DRAIN VALVE ASSEMBLY from the DRAIN PANEL.
- [10] Remove the 2 NIPPLE/ELBOW/TEE ASSEMBLIES from the OUTPUT SIDES of the DRAIN VALVE.
- [11] Remove the ELBOW from the INPUT SIDE of the DRAIN VALVE.
- [12] On the new DRAIN VALVE, install the parts removed from steps 10 and 11.
- [13] Install the new DRAIN VALVE.
- [14] Reverse the procedure to assemble the DRAIN PANEL.



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H108\_0151DC

**Figure 5-22 Removing the Drain Valve Bracket**

## Removing the Replenishment Control Valves

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the RECEIVING-END ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary. Also make sure that the water supply to the processor is shut off for this procedure.

- [1] Place a CLAMP TL-2170 on the input and output HOSES of the REPLENISHMENT CONTROL VALVE to be removed.
- [2] Loosen the HOSE CLAMPS and remove the HOSES from the REPLENISHMENT CONTROL VALVE.
- [3] Remove the HANDLE from the REPLENISHMENT CONTROL VALVE.
- [4] Remove the SCREW securing the BRACKET to the REPLENISHMENT CONTROL VALVE.
- [5] Remove the REPLENISHMENT CONTROL VALVE from the processor.
- [6] Install the new REPLENISHMENT CONTROL VALVE.
- [7] Install all parts removed in previous steps and make the necessary connection.
- [8] Remove the CLAMP TL-2170 from the INPUT and OUTPUT HOSES.

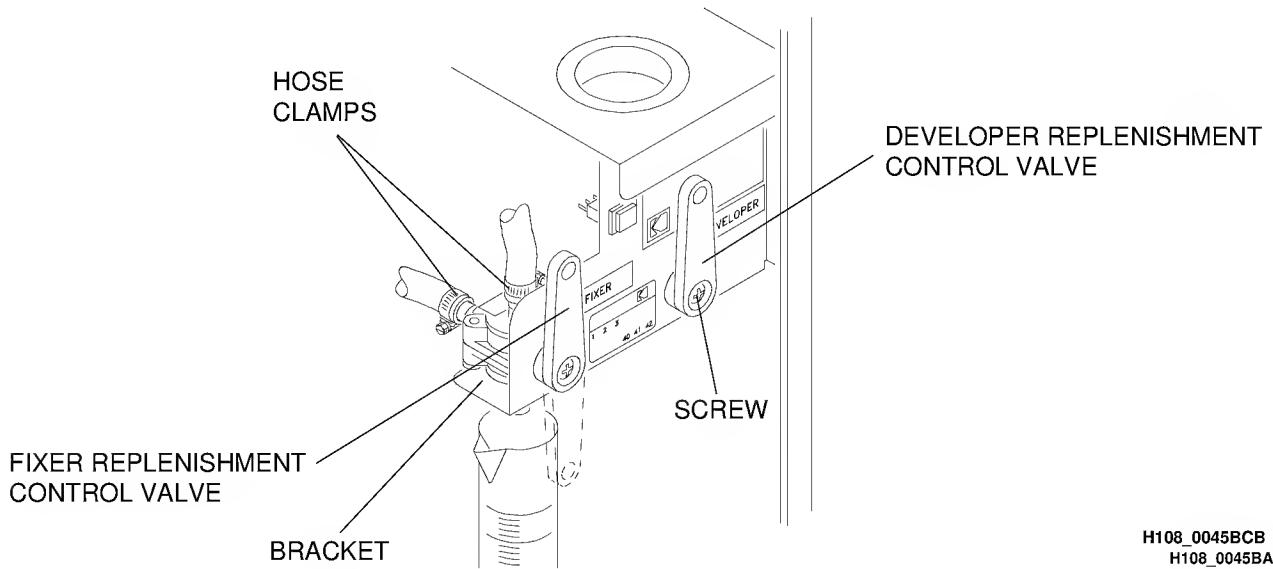


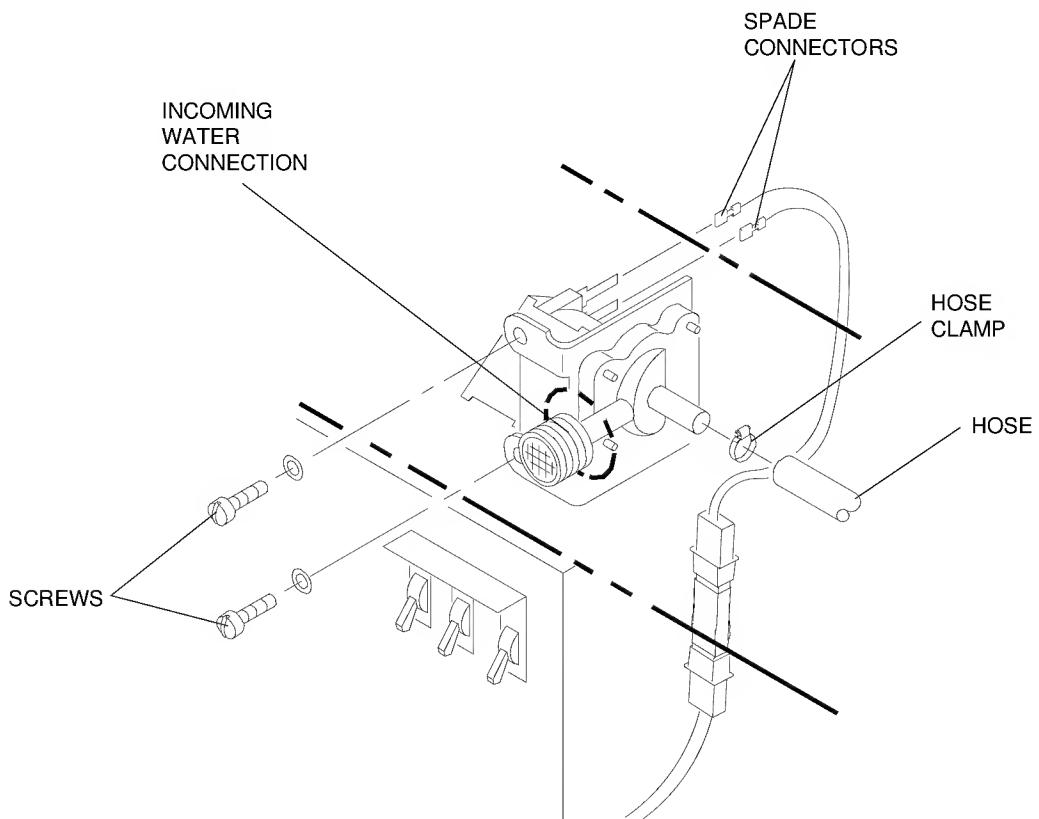
Figure 5-23 Removing the Replenishment Control Valves

## Removing the Incoming Water Solenoid

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the FEED-END, LOWER ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary. Also make sure that the water supply to the processor is shut off for this procedure.

- [1] Disconnect the SPADE CONNECTORS.
- [2] Loosen the HOSE CLAMP.
- [3] Remove the HOSE and disconnect the INCOMING WATER CONNECTION.
- [4] Remove the 2 SCREWS.
- [5] Remove the INCOMING WATER SOLENOID from the processor.
- [6] Install the new INCOMING WATER SOLENOID.
- [7] Install all parts removed in previous steps and make the necessary connections.



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H108\_0153DC

Figure 5-24 Removing the Incoming Water Solenoid

## Removing the Wash Drain Solenoid

### IMPORTANT

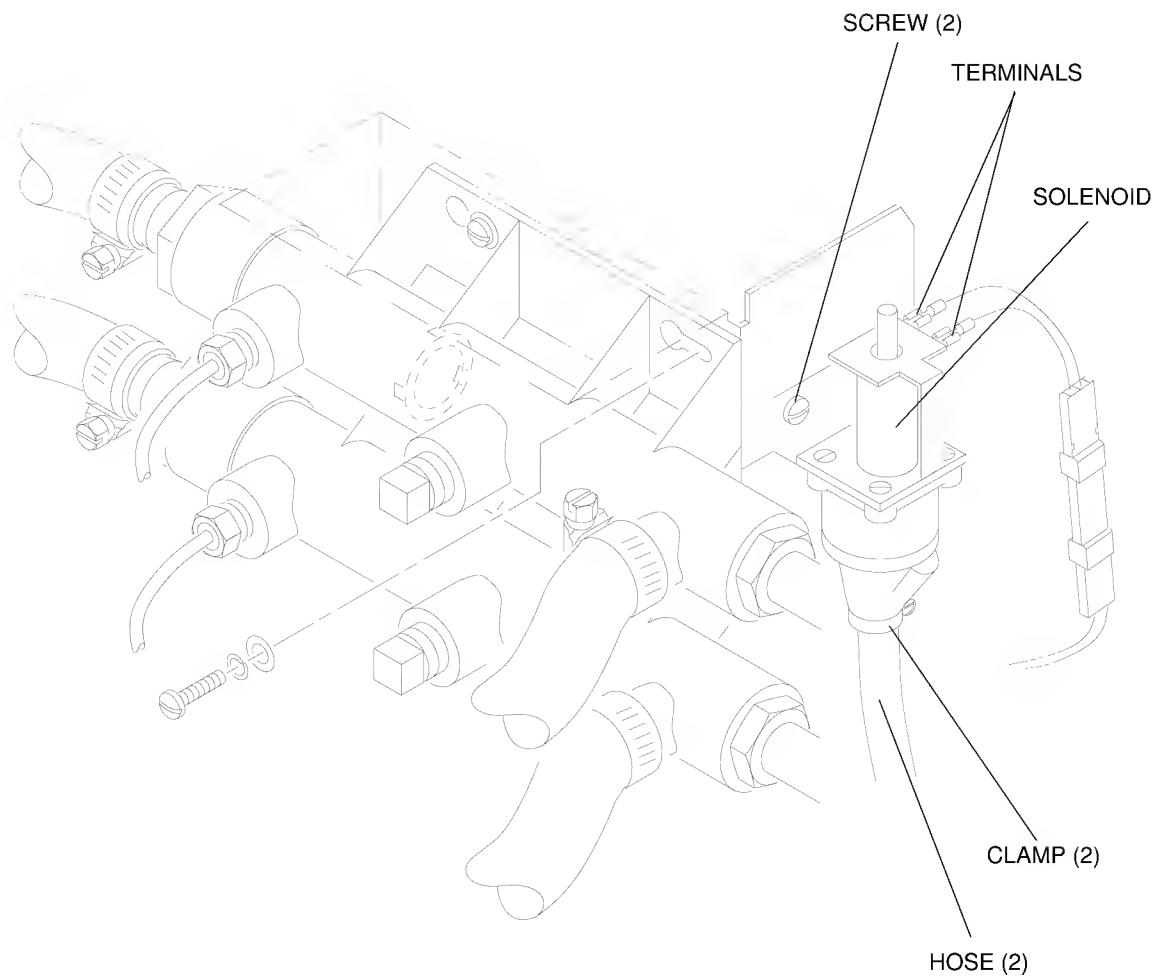
For this procedure the processor must be deenergized. See page 1-7. In addition, the TOP COVER and the NON-DRIVE SIDE ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-7 for instructions, if necessary. Also make sure that the water supply to the processor is shut off for this procedure.

- [1] Disconnect the 2 TERMINALS. See Figure 5-25.
- [2] Loosen the 2 HOSE CLAMPS.
- [3] Remove the 2 HOSES.

### NOTE

As you remove these HOSES, place a mark on each HOSE so that you can identify the HOSES for assembly.

- [4] Remove the 2 SCREWS.
- [5] Remove the WASH SOLENOID from the processor.
- [6] Install the new WASH SOLENOID.
- [7] Install all parts removed in previous steps and make the necessary connections.



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H108\_0152DA

**Figure 5-25 Disconnecting Terminals**

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## **SECTION 6**

### **Electrical**

#### **IMPORTANT**

Most of the procedures in this section require that you deenergize the processor before beginning the first step of the service procedure; and many of the procedures require that you remove the TOP COVER, and the ACCESS PANELS from the processor before beginning the procedure. For more information about how to deenergize the processor, see page 1-7. For more information about how to remove the ACCESS PANELS of the processor, see pages 1-3 through 1-5.



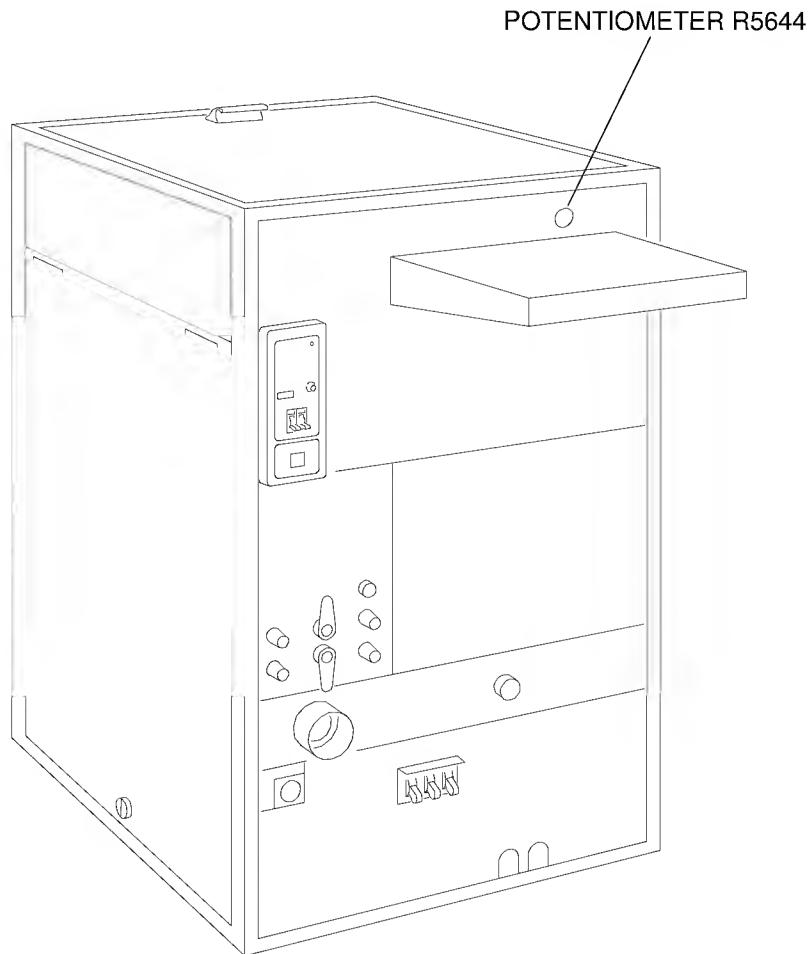
Possible damage from electrostatic discharge.

## Adjusting the Film Feed Signal

### NOTE

The adjustment for the sound of the FILM FEED SIGNAL is controlled by POTENTIOMETER R5644 on the 5600 CIRCUIT BOARD.

- [1] To adjust the sound of the FILM FEED SIGNAL, rotate POTENTIOMETER R5644 clockwise ↗ to increase the sound and counterclockwise ↘ to decrease the sound. Use a POTENTIOMETER ALIGNMENT TOOL.



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H108\_0317DA

Figure 6-1 Adjusting Loudness

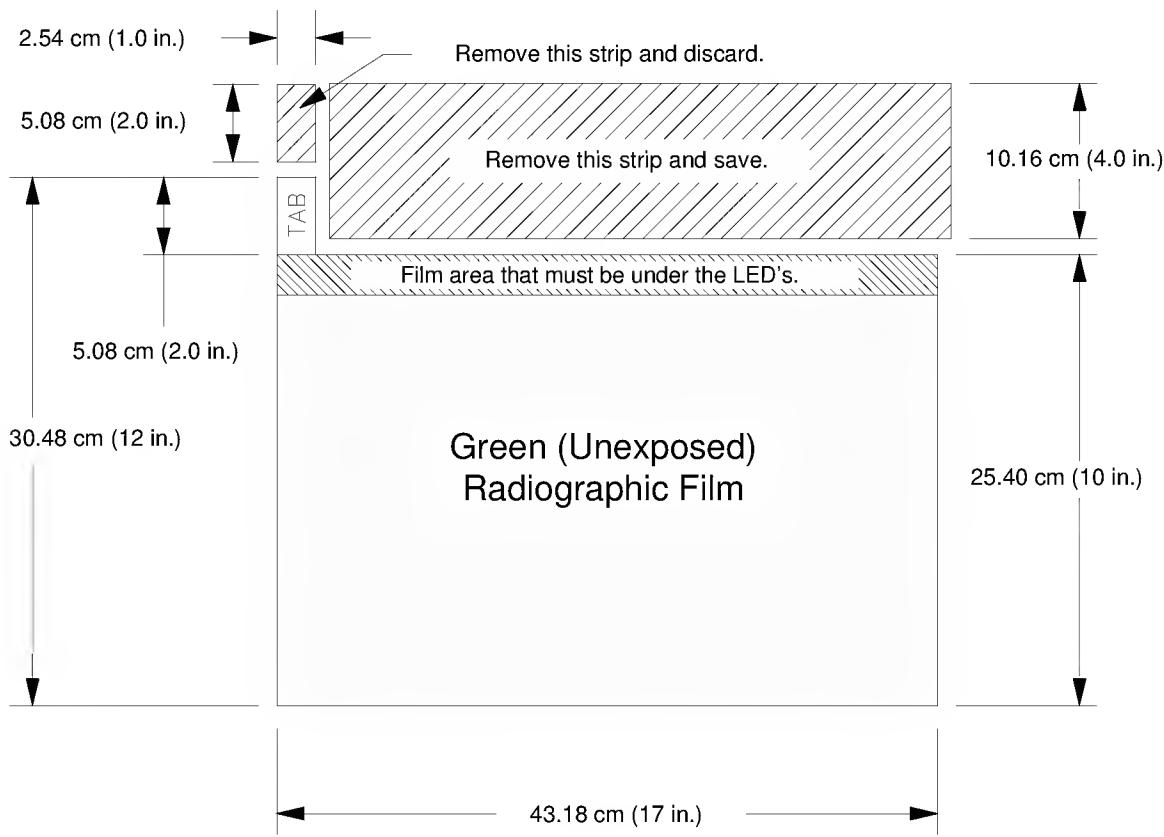
## Adjusting the Entrance Detector Switch

The following procedure does not apply if you have a MULTILOADER or an AUTOMATIC FILM FEEDER connected to the processor. Call Service Support if you need another version of this adjustment procedure.

### IMPORTANT

If a portable computer is used, see the procedure "Using a Portable Computer to Adjust the Entrance Detector Switch" on page 6-8.

- [1] Move the MAIN CIRCUIT BREAKER CB1 to the "I" position to energize the processor.
- [2] Remove the TOP COVER and DRIVE SIDE ACCESS PANEL. If necessary, see page 1-3.
- [3] Set the processor to the Standard Cycle. See the Operator Manual.
- [4] Make a FILM TOOL. Use the following specifications:



H108\_0168DC

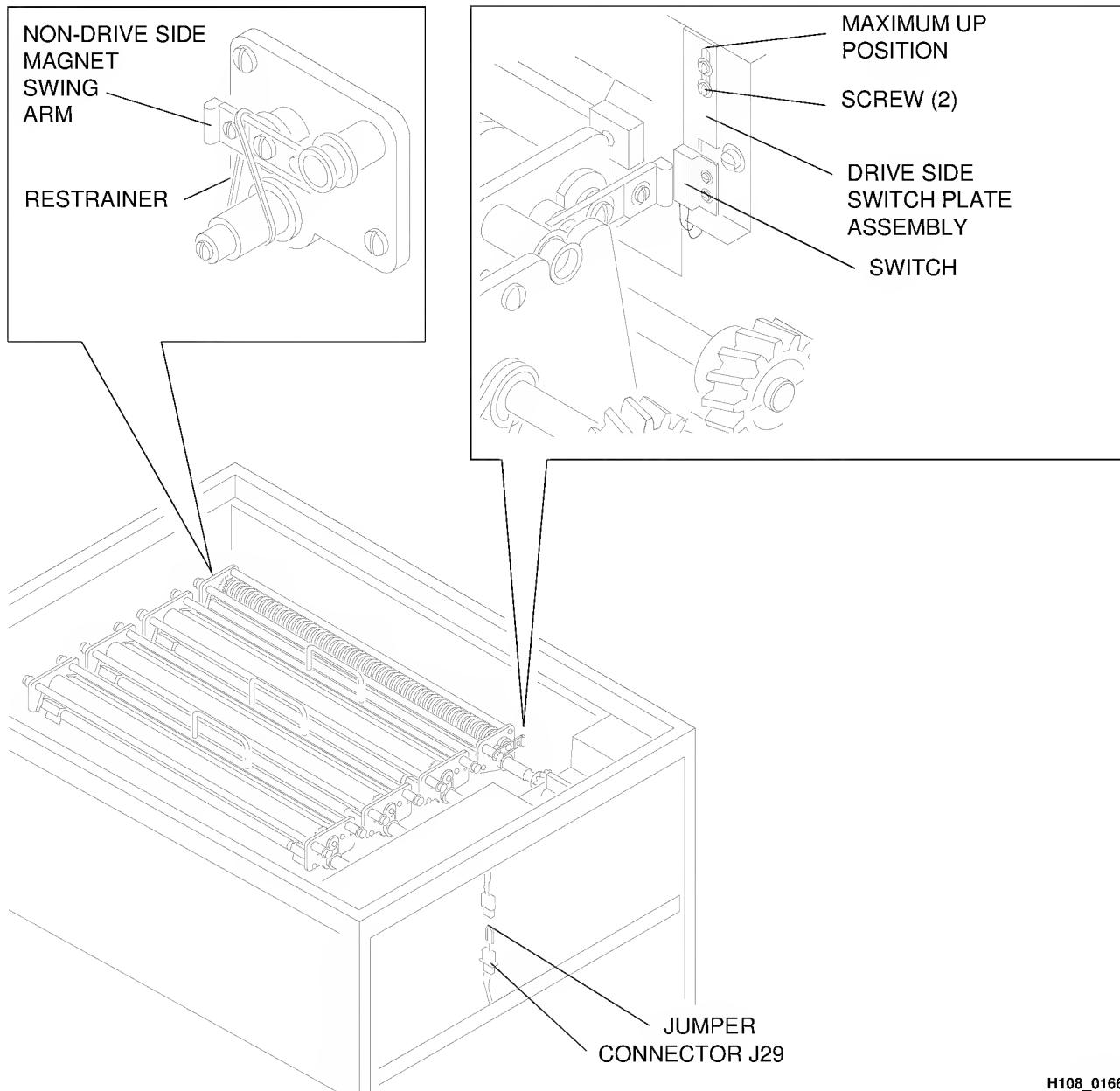
Figure 6-2 Making a Film Tool

- [5] Disconnect CONNECTOR J29.
- [6] Install a JUMPER into CONNECTOR J29 to disable the COVER INTERLOCK SWITCH.

**IMPORTANT**

To allow a correct reading, prevent the SWITCH from actuating during the adjustment.

- [7] Loosen the 2 SCREWS and move the DRIVE SIDE SWITCH PLATE ASSEMBLY up to the maximum position.
- [8] Hold the NON-DRIVE SIDE MAGNET SWING ARM to prevent movement. If necessary, install a RESTRAINER.



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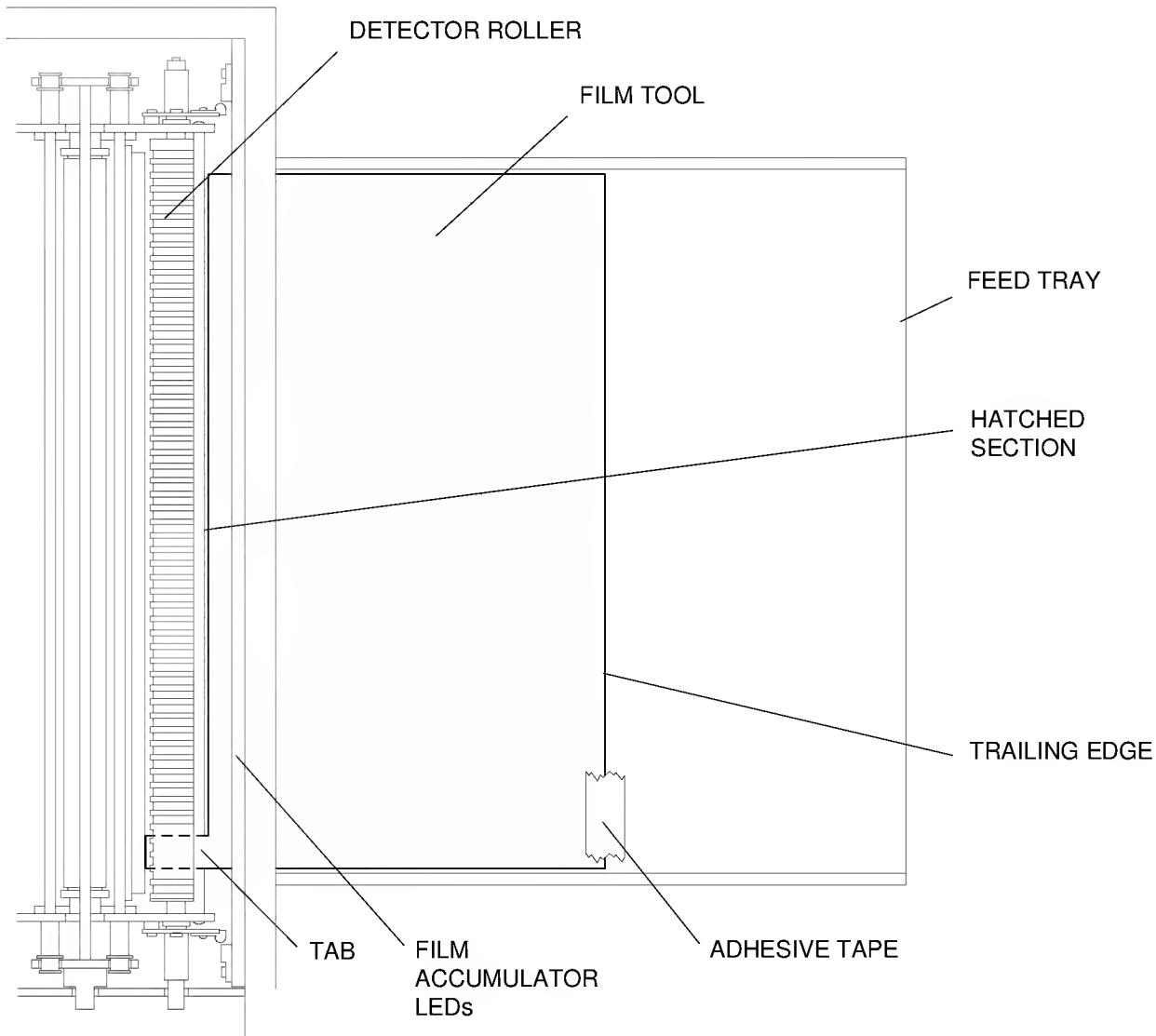
Figure 6-3 Adjusting the Switch Plate Assembly

- [9] Place the FILM TOOL on the FEED TRAY with the FILM TAB on the drive side of the processor.



Do not allow the FILM TOOL to enter completely into the DETECTOR ROLLERS during the next step.

- [10] Carefully guide the FILM TOOL until the TAB is between the DETECTOR ROLLERS and the HATCHED SECTION of the FILM TOOL is under the FILM ACCUMULATOR LEDs.
- [11] Fasten the TRAILING EDGE of the FILM TOOL to the FEED TRAY with adhesive tape.



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H108\_0169DC

Figure 6-4 Using the Film Tool

- [12] Adjust the SWITCH PLATE ASSEMBLY:
- Loosen the 2 SCREWS.
  - Move the SWITCH PLATE ASSEMBLY down, approximately 2.5 mm (0.100 in.).
  - Wait 12 seconds.
  - If the REPLENISHER PUMPS begin operating, tighten the 2 SCREWS and continue with step 13.
  - If the REPLENISHER PUMPS do not begin operating, repeat step 12.

- [13] Remove the adhesive tape and pull the FILM TOOL away from the DETECTOR ROLLERS. The REPLENISHER PUMPS will stop.

#### NOTE

The time required to stop the REPLENISHER PUMPS corresponds to the amount of time the FILM TOOL remained under the FILM ACCUMULATOR LEDs.

- [14] Release the NON-DRIVE SIDE MAGNET SWING ARM.
- [15] Do steps 7-14 again to adjust the NON-DRIVE SIDE ENTRANCE DETECTOR SWITCH.

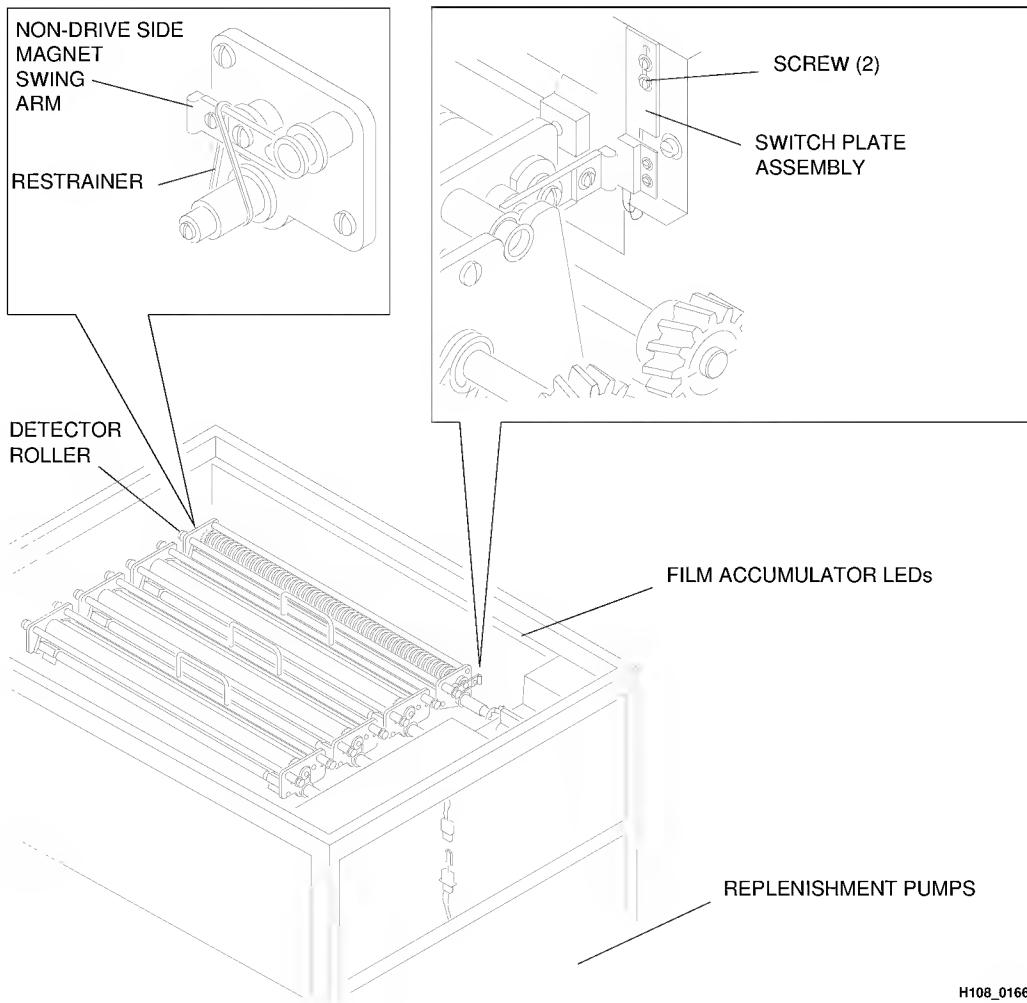


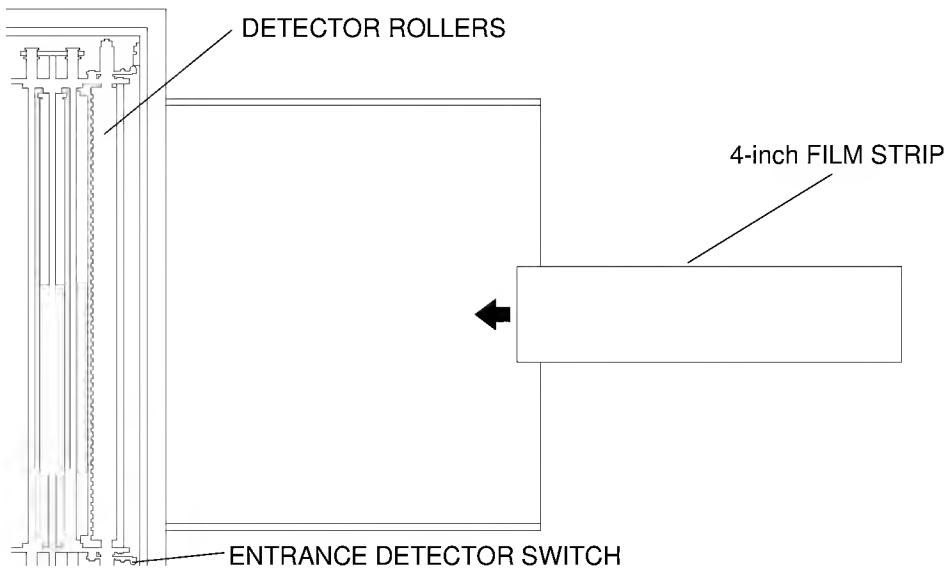
Figure 6-5 Adjusting the Switch Plate Assembly

## Final Checkout



Do not place the FILM TOOL between the DETECTOR ROLLERS during the next step.

- [16] Check that the ENTRANCE DETECTOR SWITCH is adjusted correctly:
  - (a) Insert the 43.18 cm (17 in.) end of the FILM TOOL under the FILM ACCUMULATOR LEDs.
  - (b) If the REPLENISHER PUMPS begin operating after approximately 12 seconds, one or both of the ENTRANCE DETECTOR SWITCHES is not adjusted correctly. Repeat steps 9-16 of the adjustment procedure.
  - (c) If the REPLENISHER PUMPS do not begin operating, guide the 4-inch FILM STRIP, cut from the FILM TOOL, into the center of the DETECTOR ROLLERS and allow it to pass through the processor 3 times. The REPLENISHER PUMPS should begin operating after the FILM TOOL has been inserted 3 times.
  - (d) If the REPLENISHER PUMPS do not begin operating after the FILM TOOL has been inserted 3 times, do steps 9-16 of the adjustment procedure.
- [17] Set the processor to the previous cycle.
- [18] Remove the JUMPER and connect CONNECTOR J29.

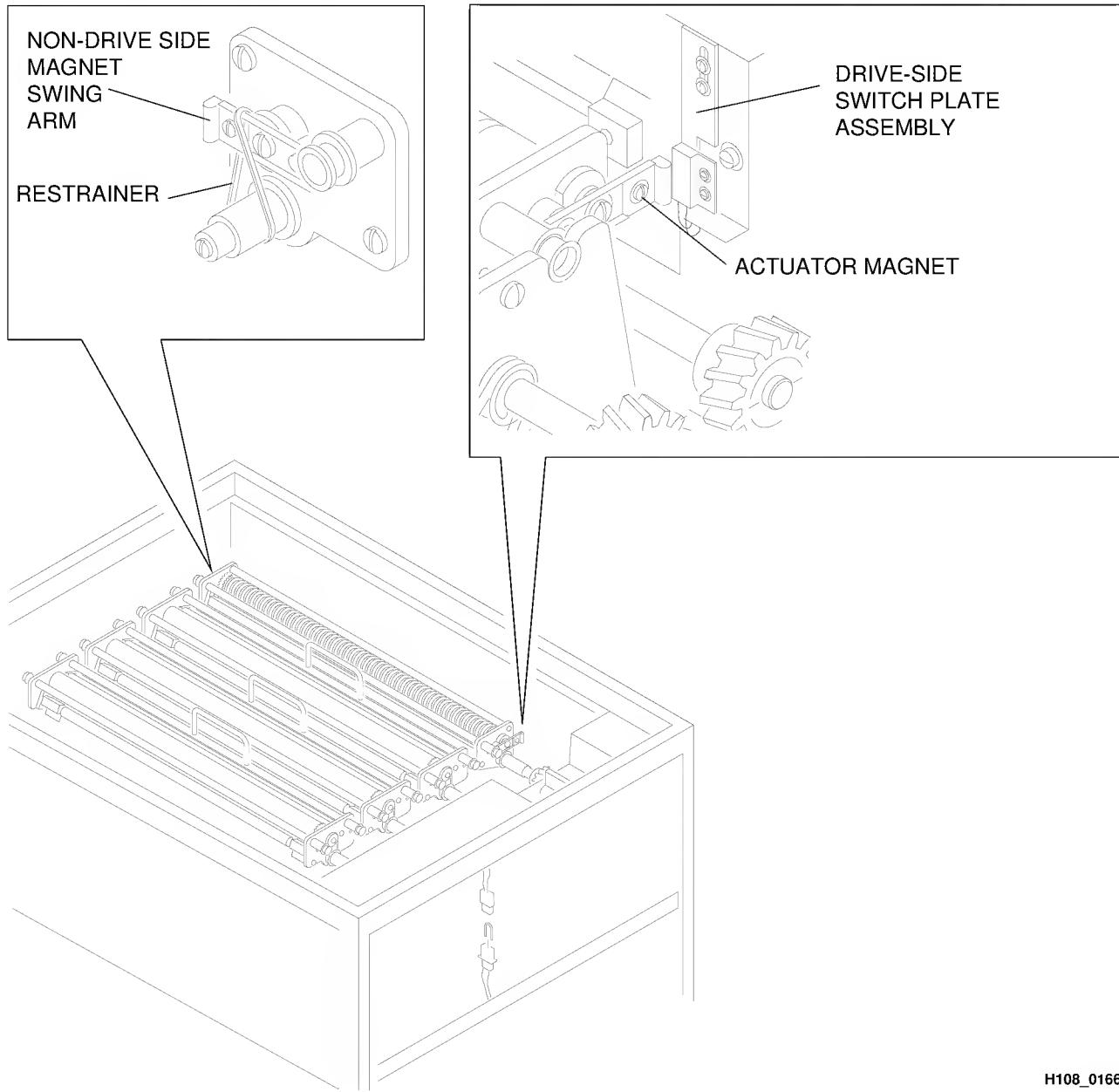


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H108\_0167BC

**Figure 6-6 Guiding the Film Strip into the Detector Rollers**

## Using a Portable Computer to Adjust the Entrance Detector Switch

- [1] Move the MAIN CIRCUIT BREAKER CB1 to the "I" position to energize the processor.
- [2] Remove the TOP COVER.
- [3] Install a RESTRAINER on the NON-DRIVE SIDE MAGNET SWING ARM.



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H108\_0166DA

Figure 6-7 Adjusting the Switch Plate Assembly

- [4] Use unprocessed film to make a 2.5 cm (1.0 in.) x 12.5 cm (5.0 in.) FILM TOOL.
- [5] Connect the portable computer to PIC CONNECTOR P204. Use CABLE TL-4391. Allow the portable computer to establish communications with the processor.
- [6] From the "Specific Test Mode" main menu, select the "Processor Sensor Test" option. If necessary, see the "User Manual for Kodak X-Omat RA Processors Software Diagnostics" Publication No. 636719.
- [7] At the feed end of the processor, insert the FILM TOOL into the DETECTOR CROSSOVER ASSEMBLY. Align the edge of the FILM TOOL with the drive side of the FEED TRAY.
- [8] Check that "Film detected" is indicated on the screen, as the FILM TOOL is inserted.
- [9] Remove the FILM TOOL from the DETECTOR CROSSOVER ASSEMBLY.
- [10] Check that "No film detected" is indicated on the screen.
- [11] If the indications in steps 8 and 10 do not occur, adjust the position of the DRIVE-SIDE SWITCH PLATE ASSEMBLY and/or the ACTUATOR MAGNET. See Figure 6-7.
- [12] Do steps 7 - 11 until the correct indications occur when the FILM TOOL is inserted into and removed from the DETECTOR CROSSOVER ASSEMBLY.

PROCESSOR SENSOR TEST

Dev Tank Sensor	:
Fix Tank Sensor	:
Film Detect Sensor	: Film detected
Cover Switch	:

Any key=Continue

PROCESSOR SENSOR TEST

Dev Tank Sensor	:
Fix Tank Sensor	:
Film Detect Sensor	: No film detected
Cover Switch	:

Any key=Continue

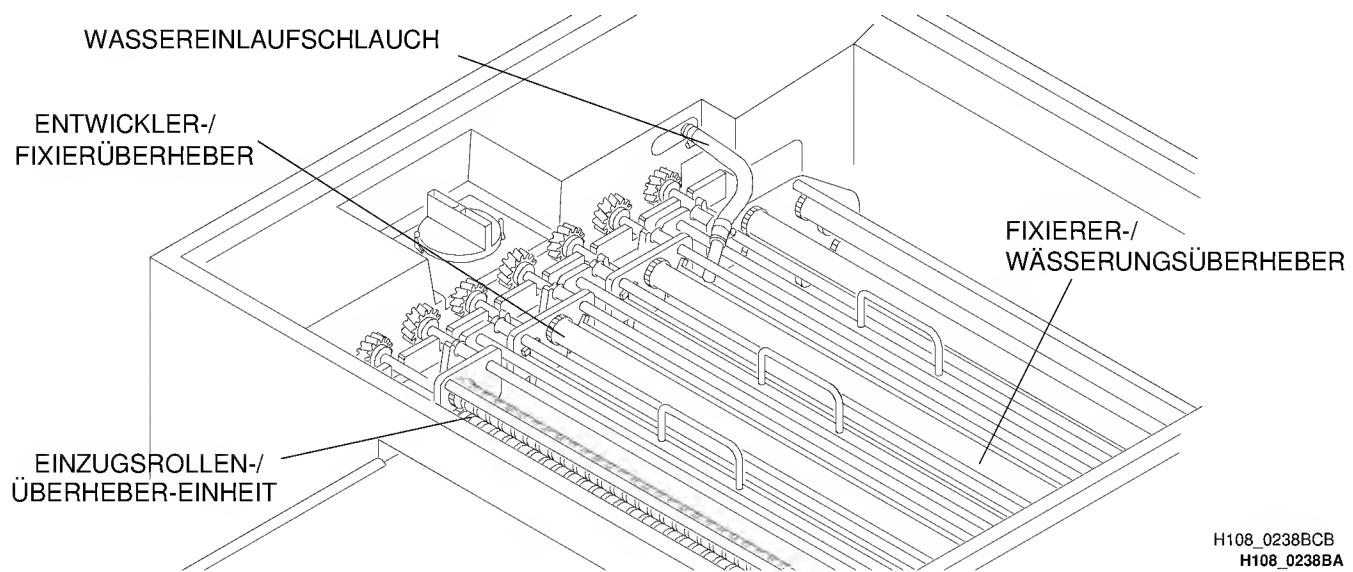


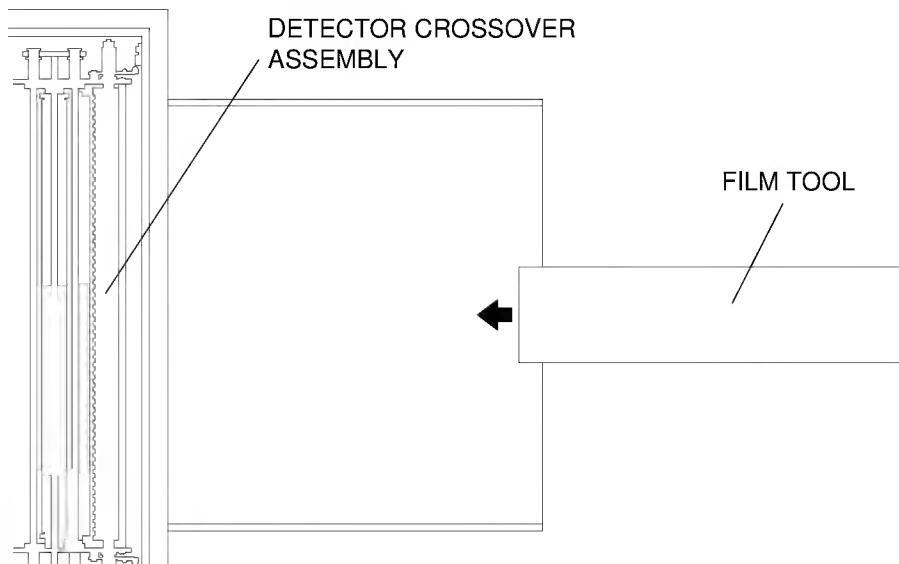
Figure 6-8 Inserting the Film Tool

- [13] Remove the RESTRAINER from the NON-DRIVE SIDE MAGNET SWING ARM.
- [14] Install the RESTRAINER on the DRIVE-SIDE MAGNET SWING ARM.
- [15] Do steps 7 - 12 to check the non-drive side ENTRANCE DETECTOR SWITCH. Align the edge of the FILM TOOL with the non-drive side of the FEED TRAY.
- [16] Remove the RESTRAINER.

#### Final Checkout

- [17] Insert the FILM TOOL into the center of the DETECTOR CROSSOVER ASSEMBLY.

- [18] Check that "Film detected" is indicated on the screen, as the FILM TOOL is inserted.
- [19] Remove the FILM TOOL from the DETECTOR CROSSOVER ASSEMBLY.
- [20] Check that "No film detected" is indicated on the screen.
- [21] If necessary, do the procedure again until the ENTRANCE DETECTOR SWITCHES are adjusted correctly.
- [22] Exit diagnostics.
- [23] Disconnect the portable computer.
- [24] Install the TOP COVER onto the processor.



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H108\_0167BC

**Figure 6-9 Inserting the Film Tool**

## Removing Circuit Breaker CB1

### WARNING

Dangerous Voltage

- [1] Move the WALL POWER SWITCH to the "OFF" position.
- [2] Attach the MAGNETIC POWER WARNING SIGN, TL-1926, to the wall power switch indicating that the processor is being serviced.
- [3] Remove the 4 SCREWS that hold the CONTROL PANEL. See Figure 6-10.



Prevent damage to the wires and components.

- [4] Remove the CONTROL PANEL from the processor.
- [5] Disconnect and label the 8 wires connected to CIRCUIT BREAKER CB1.
- [6] Remove the 4 SCREWS that hold CIRCUIT BREAKER CB1.
- [7] Remove CIRCUIT BREAKER CB1.
- [8] Reverse the procedure to install a new CIRCUIT BREAKER CB1.

## Removing Safelight Receptacle J1

### WARNING

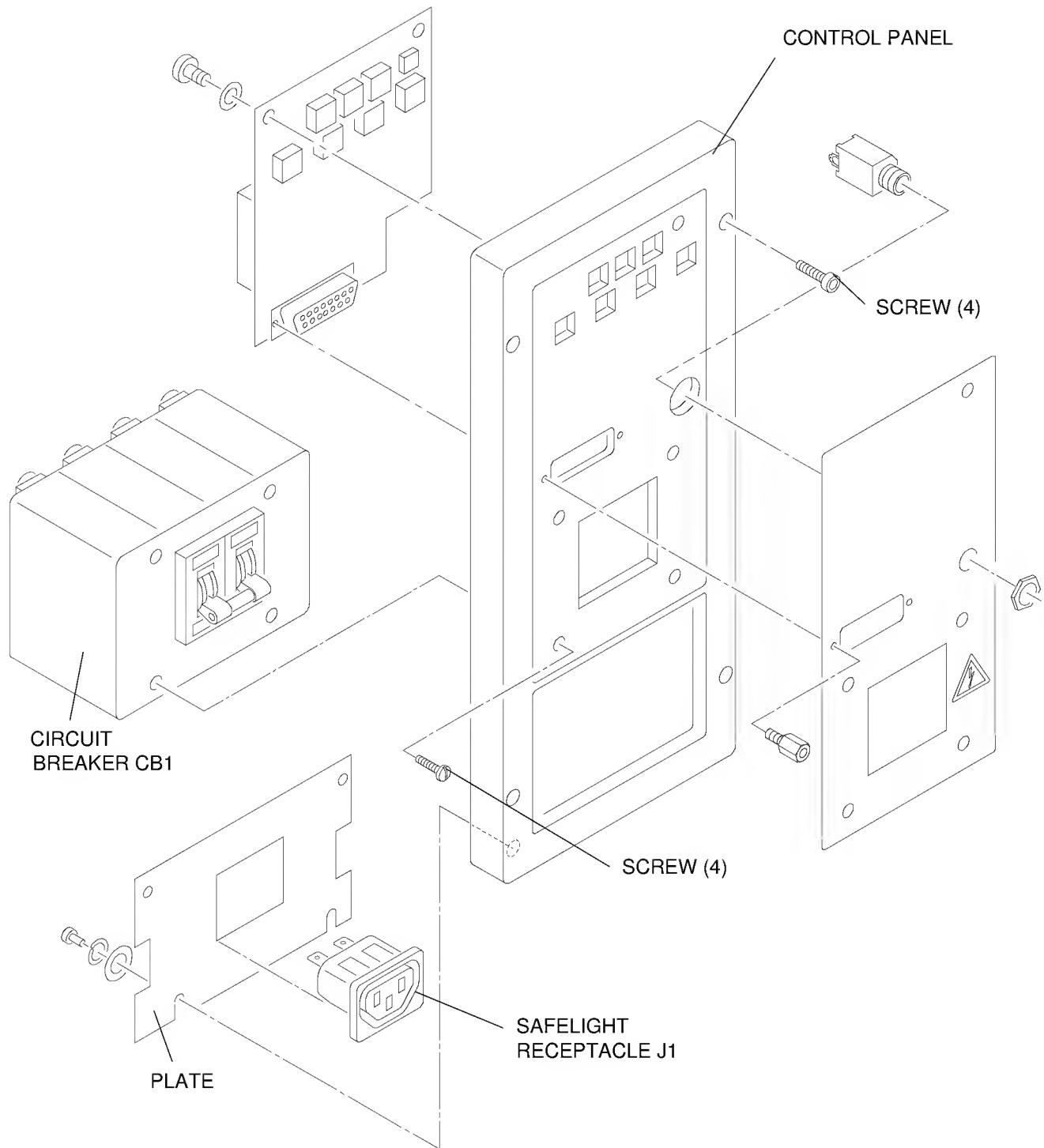
Dangerous Voltage

- [1] Move the WALL POWER SWITCH to the "OFF" position.
- [2] Remove the 4 SCREWS that hold the CONTROL PANEL. See Figure 6-10.



Prevent damage to the wires and components.

- [3] Remove the CONTROL PANEL from the processor.
- [4] Disconnect and label the 3 wires connected to SAFELIGHT RECEPTACLE J1.
- [5] Hold and press the LOCKING TABS to remove the SAFELIGHT RECEPTACLE J1 from the PLATE.
- [6] Reverse the procedure to install a new SAFELIGHT RECEPTACLE J1.



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H108\_0254EA

**Figure 6-10 Removing Circuit Breaker CB1 and Safelight Receptacle J1**

## Removing the 200 Circuit Board Assembly

### WARNING

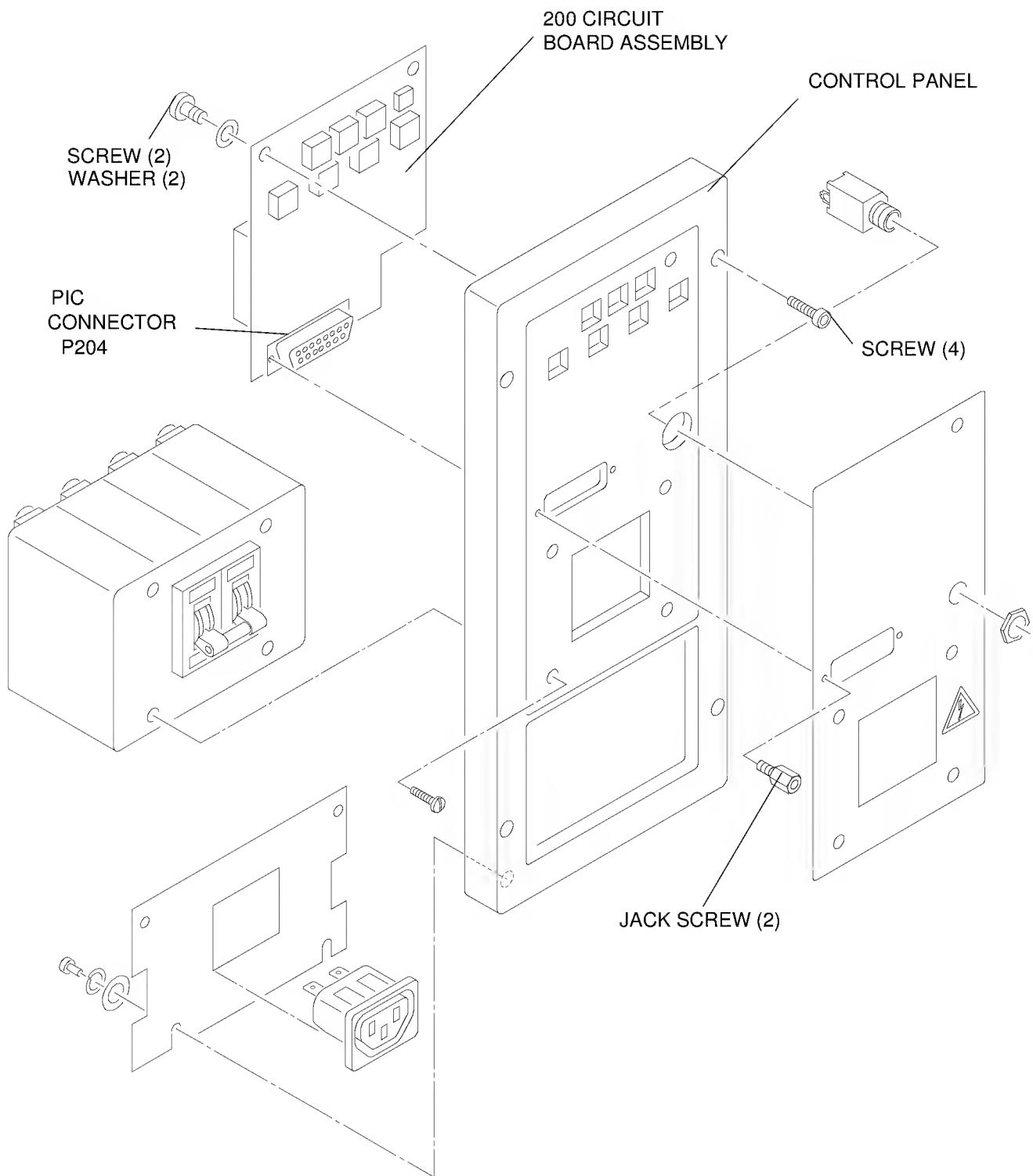
Dangerous Voltage

- [1] Move the WALL POWER SWITCH to the "OFF" position.
- [2] Attach the MAGNETIC POWER WARNING SIGN, TL-1926, to the wall power switch indicating that the processor is being serviced.
- [3] If necessary, disconnect P/J204.
- [4] Remove the 4 SCREWS that hold the CONTROL PANEL. See Figure 6-11.

### CAUTION

- Possible damage from electrostatic discharge.
- Prevent damage to the wires and components.

- [5] Remove the CONTROL PANEL from the processor.
- [6] Disconnect CONNECTOR P/J201, P/J202, and P/J203.
- [7] Remove the 2 plastic SCREWS and 2 plastic WASHERS.
- [8] Remove the 2 JACK SCREWS from the PIC CONNECTOR P204.
- [9] Remove the 200 CIRCUIT BOARD ASSEMBLY.
- [10] Reverse the procedure to install a new 200 CIRCUIT BOARD ASSEMBLY.



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H108\_0254EA

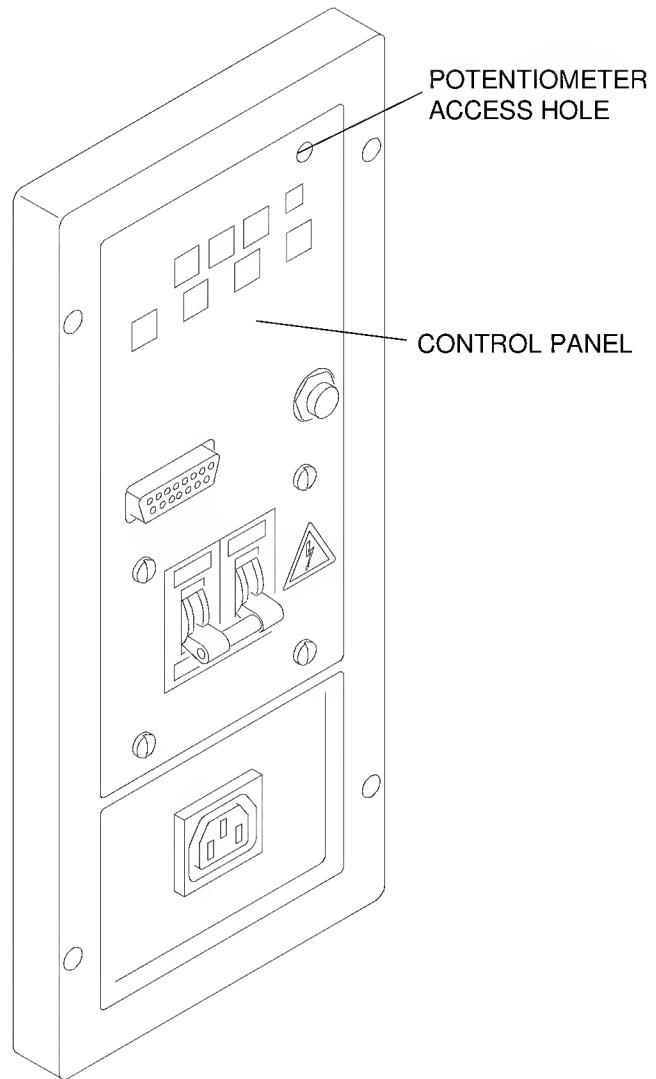
Figure 6-11 Removing the 200 Circuit Board Assembly

## Adjusting the Brightness for the 200 Circuit Board Display (Control Panel)



The 200 CIRCUIT BOARD DISPLAY (CONTROL PANEL) is located on the side of the processor which is in the darkroom. To prevent fogging of the film, check that the brightness of the display is no brighter than is necessary to read the display.

- [1] Insert a POTENTIOMETER ALIGNMENT TOOL through the ACCESS HOLE in the CONTROL PANEL and into the POTENTIOMETER.
- [2] Rotate the POTENTIOMETER clockwise ↗ to brighten the display. Rotate the POTENTIOMETER counterclockwise ↙ to dim the display.
- [3] Move the darkroom light switch to the "OFF" position.
- [4] Adjust the POTENTIOMETER until the brightness of the display is no brighter than is necessary for you to read the indicators shown, yet it is not bright enough to fog film.



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H108\_0229CA

**Figure 6-12 Adjusting the Brightness of the 200 Board Display**

## Removing the 350 Circuit Board Display Assembly

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the TOP COVER and DRIVE SIDE ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

- [1] Move the MAIN CIRCUIT BREAKER CB1 to the "O" position to deenergize the processor.
- [2] Remove the FILTER BEZEL and SPLASH GUARD.



- Possible damage from electrostatic discharge.
- Prevent damage to the GROUND STRAP. Do not allow the 350 CIRCUIT BOARD DISPLAY ASSEMBLY to move forward onto the GROUND STRAP.

- [3] Disconnect the GROUND STRAP. See Figure 6-13.
- [4] Remove the 4 SCREWS, WASHERS, and LOCK WASHERS that hold the 350 CIRCUIT BOARD DISPLAY ASSEMBLY.
- [5] Disconnect CONNECTOR P/J351.
- [6] Do the following to install the new 350 CIRCUIT BOARD DISPLAY ASSEMBLY:
  - a. Install the 4 SCREWS, WASHERS, and LOCK WASHERS.
  - b. Connect the GROUND STRAP.
  - c. Connect CONNECTOR P/J351.

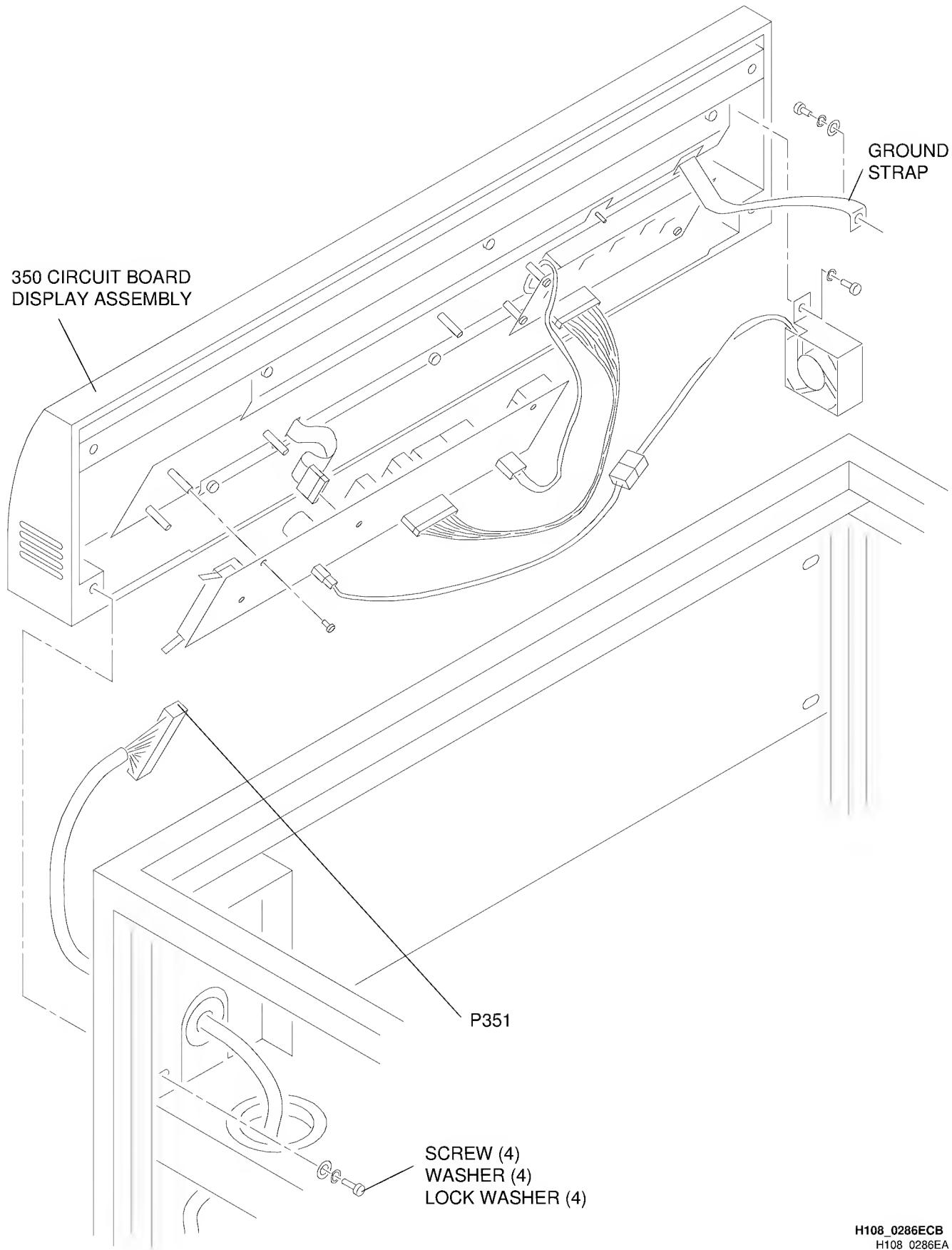


Figure 6-13 Removing the 350 Circuit Board Display Assembly

## Adjusting the Contrast of the 350 Circuit Board Display (Display Panel)

- [1] To lighten the display, press and hold the SOFT KEY indicated as "4" on the DISPLAY PANEL. At the same time, press the SOFT KEY indicated as "1" on the DISPLAY PANEL until the desired contrast is obtained.
- [2] To darken the display, press and hold the SOFT KEY indicated as "4" on the DISPLAY PANEL. At the same time, press the SOFT KEY indicated as "2" on the DISPLAY PANEL until the desired contrast is obtained.



Figure 6-14 Adjusting the Contrast of the 350 Board Display

## Removing the 500 Circuit Board Assembly

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the DRYER PANEL and the RECEIVING END ACCESS PANEL must be removed from the processor. See page 1-3 for instructions, if necessary.

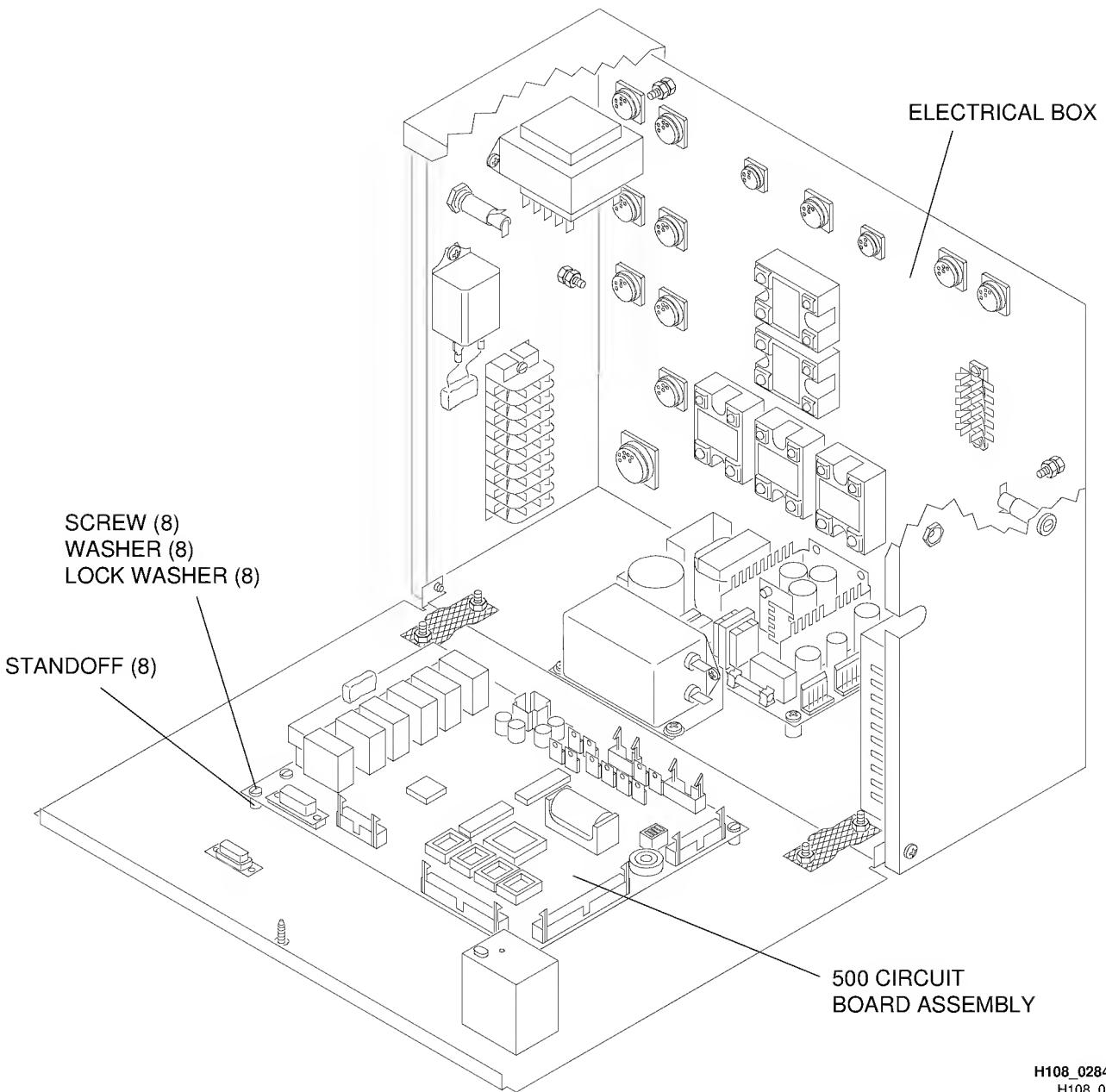
- [1] Move the MAIN CIRCUIT BREAKER CB1 to the "O" position to deenergize the processor.



Possible damage from electrostatic discharge.

- (a) Place the ESD MATT on a flat surface. Use GROUNDING KIT TL-3346.

- [2] Locate the 500 CIRCUIT BOARD ASSEMBLY in the ELECTRICAL BOX. See Figure 6-15.



**Figure 6-15 Locating the 500 Circuit Board Assembly**

[3] Disconnect the 9 CONNECTORS to release the 500 CIRCUIT BOARD ASSEMBLY.

[4] Label U17 - U20 and U28. See Figure 6-16.



The 500 CIRCUIT BOARD ASSEMBLY is an exchange part. To prevent more damage, use ESD packing materials to return the part to Parts Services.

[5] Remove the 8 SCREWS, WASHERS, and LOCK WASHERS that hold the 500 CIRCUIT BOARD ASSEMBLY.

[6] Place the 500 CIRCUIT BOARD ASSEMBLY on the ESD MATT.

[7] Remove the following:

- U17 - U20 and U28. Use the CHIP REMOVAL TOOL TL-4430.
- BATTERY BT501.

[8] Do the following to install a new 500 CIRCUIT BOARD ASSEMBLY.

- Place the new 500 CIRCUIT BOARD ASSEMBLY on the ESD MATT.
- Install the CHIPS and BATTERY removed in step 7. Check for correct position.
- Place the new 500 CIRCUIT BOARD ASSEMBLY on the 8 STANDOFFS. See figure 6-15.
- Install the 8 SCREWS, WASHERS, and LOCK WASHERS removed in step 5.
- Connect the 9 CONNECTORS.

[9] Check the setup of the new 500 CIRCUIT BOARD ASSEMBLY.

- On SWITCH S501, all positions are “OFF”.
- The JUMPERS are installed:

Position	Pin
E1	1 and 2
E2	1 and 2

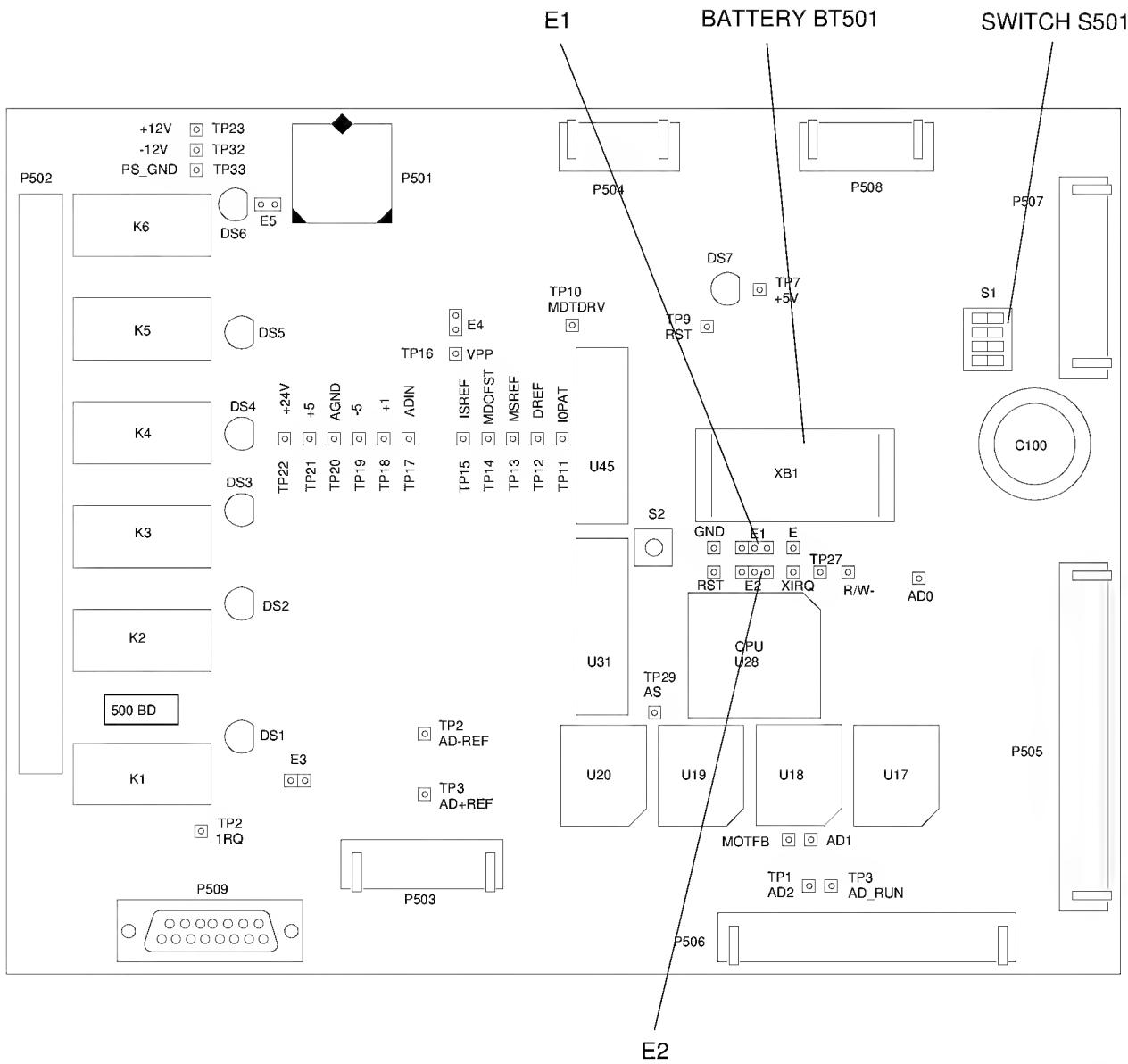
[10] Close the ELECTRICAL BOX.

[11] Install the DRYER PANEL and the RECEIVING END ACCESS PANEL.

[12] Move the MAIN CIRCUIT BREAKER CB1 to the “I” position to energize the processor.

[13] Check for the “READY” light.

[14] Check for correct operation of the processor.



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H108\_0285DA

Figure 6-16 500 Circuit Board Assembly

## Removing the 5600 Circuit Board Assembly

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the TOP COVER must be removed from the processor. See page 1-3 for instructions, if necessary.

- [1] Move the MAIN CIRCUIT BREAKER CB1 to the "O" position to deenergize the processor.

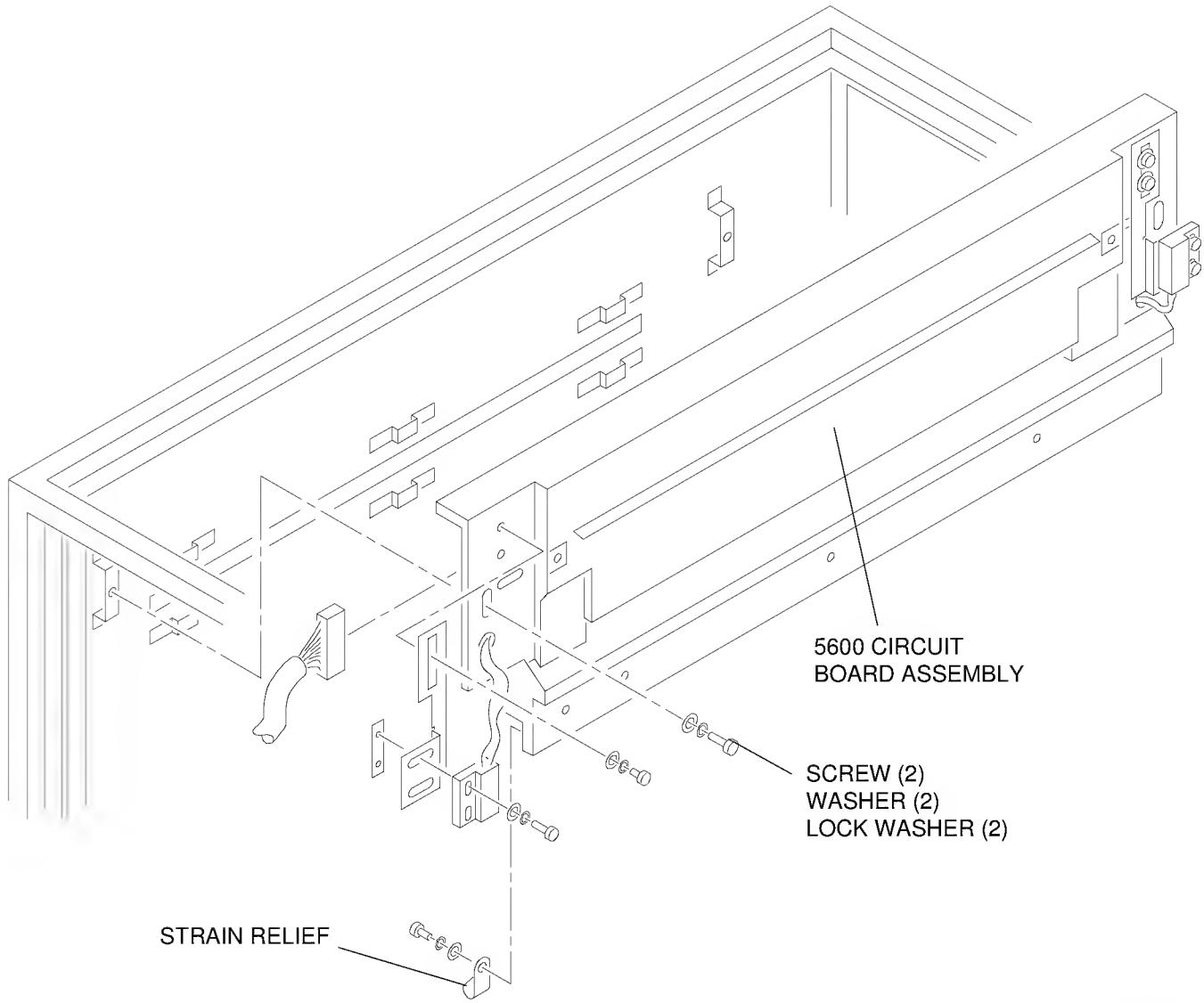


Possible damage from electrostatic discharge.

- [2] Remove:

- 2 SCREWS
- 2 WASHERS
- 2 LOCK WASHERS
- STRAIN RELIEF

- [3] Disconnect CONNECTOR P/J5601. See Figure 6-17.
- [4] Remove the 5600 CIRCUIT BOARD ASSEMBLY.
- [5] Reverse the procedure to install a new 5600 CIRCUIT BOARD ASSEMBLY.
- [6] Do the procedure to adjust the ENTRANCE DETECTOR SWITCHES. See page 6-3.



**Figure 6-17 5600 Circuit Board Assembly**

## Removing the Buck/Boost Transformer

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the FEED-END, LOWER ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

- [1] Move the WALL POWER SWITCH to the "OFF" position. Attach the MAGNETIC POWER WARNING SIGN, TL-1926, to the wall power switch indicating that the processor is being serviced.
- [2] Move the MAIN CIRCUIT BREAKER CB1 and AUXILIARY CIRCUIT BREAKERS CB2, CB3, and CB4 to the "O" position.

### IMPORTANT

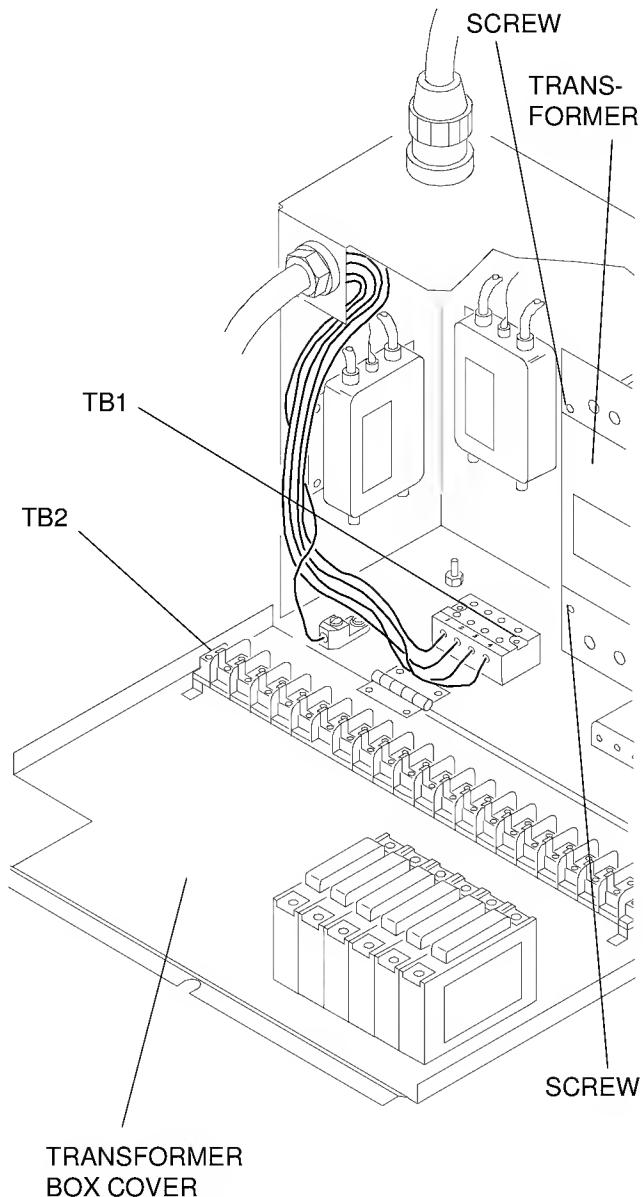
Label each of the 8 WIRES as it is disconnected from the TRANSFORMER.

- [3] Disconnect and label WIRES X1 — X4 and WIRES H1 — H5 on TB2.



The TRANSFORMER is heavy. Make sure that the TRANSFORMER is supported before you remove the 4 SCREWS.

- [4] Remove the 4 SCREWS to remove the TRANSFORMER from the TRANSFORMER BOX.
- [5] Reverse the above procedure to install a new TRANSFORMER. See the Installation Instructions for the correct configuration of the JUMPER WIRES.



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**Figure 6-18 Removing the Buck/Booster Transformer**

## Removing an EMI Line Filter

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the FEED-END, LOWER ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

- [1] Remove the WIRES at the EMI LINE FILTER 1, 2, 3, or 4 (EMI LINE FILTER 3 is not shown.)

### NOTE

Identify line and load labeling so that you can connect the WIRES to the new EMI LINE FILTER in their correct orientation.

- [2] Remove and keep the 4 SCREWS securing the EMI LINE FILTER.
- [3] Remove the EMI LINE FILTER.
- [4] Reverse the above procedure to install a new EMI LINE FILTER.

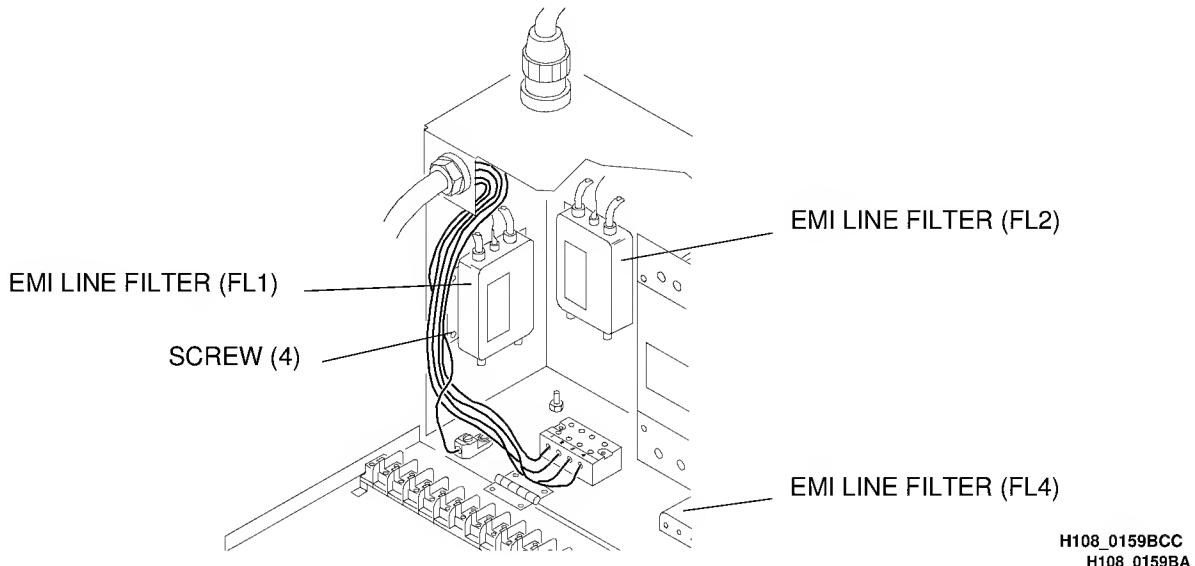


Figure 6-19 Removing EMI Line Filters

## Removing the Quad Power Supply

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the FEED-END, LOWER ACCESS PANEL and the RECEIVING-END ACCESS PANEL must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.



### CAUTION

Use caution to prevent damage from electrostatic discharge.

- [1] Open the ELECTRICAL BOX. See Figure 6-20.
- [2] Disconnect CONNECTORS P/J 110 and P/J 210 from the A1 QUAD POWER SUPPLY.
- [3] Remove the 4 SCREWS supporting the A1 QUAD POWER SUPPLY.
- [4] Remove the 4 SCREWS from the back of the ELECTRICAL BOX that secure the HEAT SINK.
- [5] Remove the 2 SCREWS that hold the EMI FILTER FL5. Move EMI FILTER FL5 to allow removal of the A1 QUAD POWER SUPPLY.
- [6] Remove the A1 QUAD POWER SUPPLY.
- [7] Apply HEAT SINK COMPOUND to the back of the HEAT SINK on the new A1 QUAD POWER SUPPLY.
- [8] Reverse the above procedure to install a new A1 QUAD POWER SUPPLY.
- [9] Install EMI FILTER FL5.

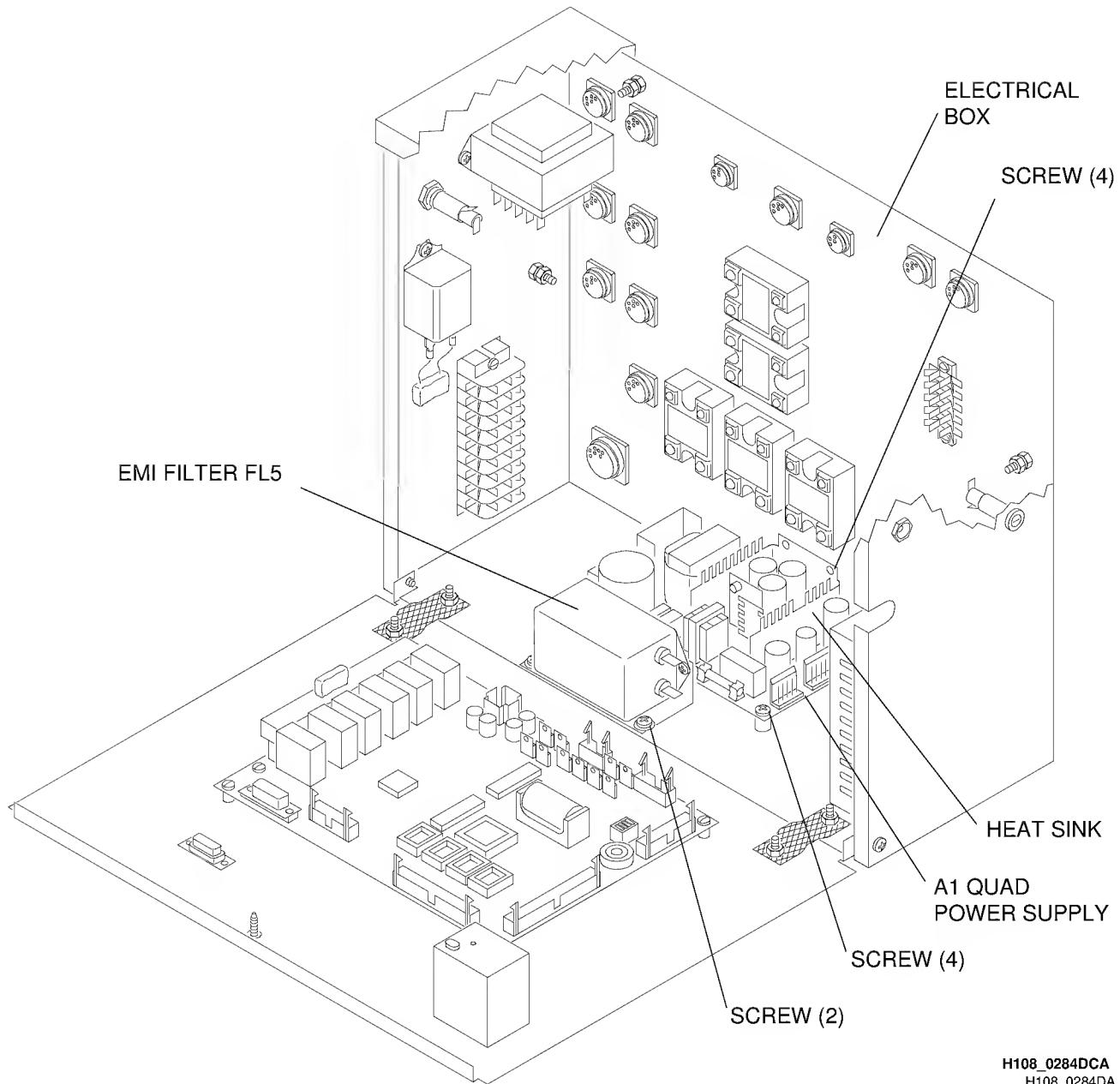


Figure 6-20 Removing the Quad Power Supply

## **SECTION 7**

### **Preventive Maintenance**

#### **IMPORTANT**

All the procedures in this section require that you deenergize the processor before beginning the first step of the service procedure; and many of the procedures require that you remove the TOP COVER, and the ACCESS PANELS from the processor before beginning the procedure. For more information about how to deenergize the processor, see page 1-7. For more information about how to remove the ACCESS PANELS of the processor, see pages 1-3 through 1-5.

## Daily Care

Reliable operation of the processor requires that all parts are cleaned, adjusted, and lubricated correctly.

### NOTE

Report any change in the operating condition of the processor to your service personnel.

### WARNING

Wear rubber gloves, safety glasses, and protective clothing when doing these maintenance procedures. See pages 1-3 through 1-7 if necessary.



Handle assemblies carefully to prevent changing their alignment. **Do not** clean the RACKS, CROSSOVER ASSEMBLIES, or SQUEEGEE ROLLERS using abrasive materials. **Do not** wash the ROLLER or RACK ASSEMBLIES with water hotter than 100°F (37.5°C).

- [1] Remove the EVAPORATION COVERS, DEVELOPER/FIXER CROSSOVER, FIXER/WASH CROSSOVER, and SQUEEGEE ASSEMBLIES. Clean the parts with warm water and a damp cloth. Dry all the parts with a clean cloth, or allow the parts to air dry.

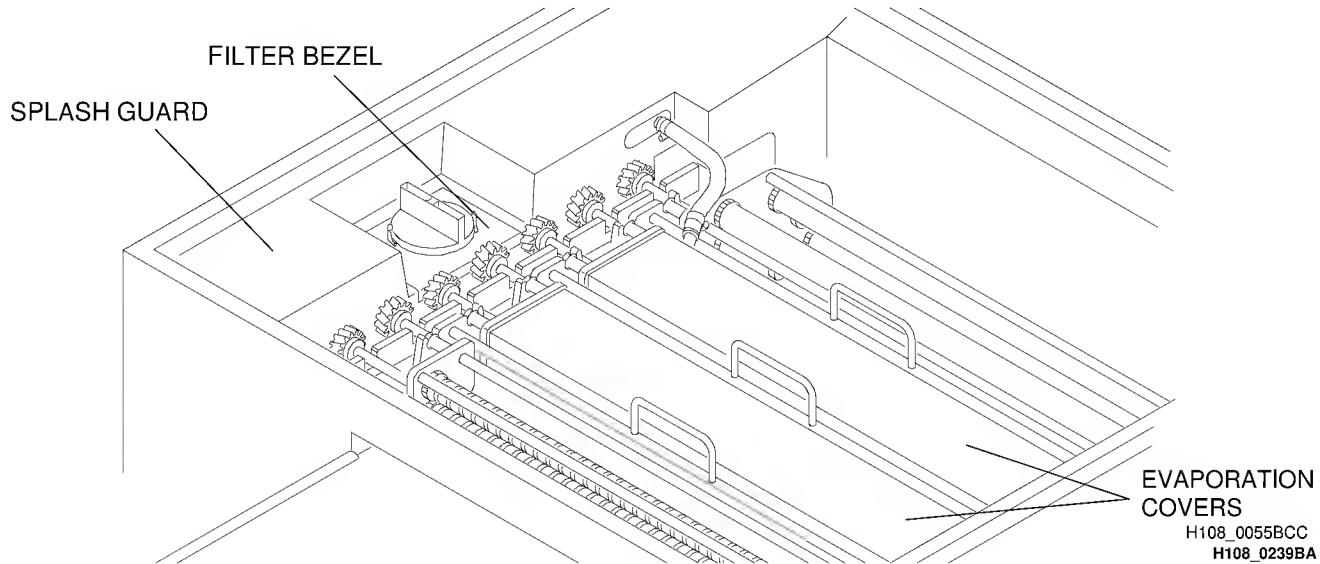


Figure 7-1 Location of Assemblies

- [2] Use a clean cloth to wipe all chemical residue from the processing section of the processor. To prevent contamination, do not use the same cloth for the FIXER and DEVELOPER sections.
- [3] Be sure that the TOP COVER remains open approximately 2 inches (5.1 cm) when the processor is deenergized.

## Weekly Cleaning and Check Procedures

### IMPORTANT

For these procedures the processor must be deenergized. See page 1-7 if necessary.

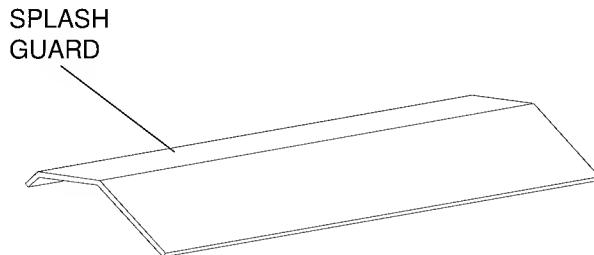
**CAUTION**

To prevent contamination of the DEVELOPER and FIXER SOLUTIONS when you remove the FIXER RACK, place the SPLASH GUARD between the DEVELOPER and FIXER TANKS. Use the RACK DRIP TRAY when you remove or install any of the RACKS.

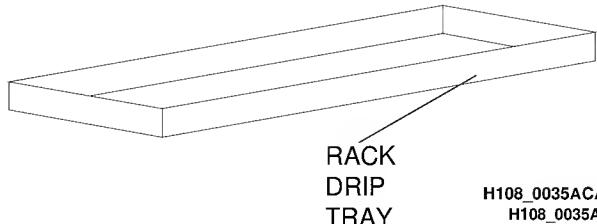
- [1] Remove the EVAPORATION COVERS, all CROSSOVER ASSEMBLIES, and all RACKS.
- [2] Clean the COVER on the 5600 CIRCUIT BOARD and the opening at the FILM FEED TRAY.
- [3] Rinse and wipe the removed parts with a damp cloth.
- [4] Clean the DETECTOR CROSSOVER with a soft fiber brush and warm water. Allow the RACK to air dry.
- [5] Check that all ROLLERS on all RACKS rotate freely.



Be sure that the SPLASH GUARD is installed between the TANKS. Install the RACKS slowly to prevent the splashing of chemicals.



- [6] Install the RACKS, CROSSOVER ASSEMBLIES, and EVAPORATION COVERS. Check that each assembly seats firmly.
- [7] Clean the REPLENISHER STRAINERS located between the REPLENISHMENT TANKS and the PUMPS.
- [8] Check that the SLOTS in the DRYER AIR TUBES are clean and oriented correctly.



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Figure 7-2 Splash Guard and Drip Tray

## Periodic Maintenance

### IMPORTANT

For these procedures the processor must be deenergized. See page 1-7 if necessary.

- [1] Once a month, or after processing 5,000 sheets of film, calibrate the REPLENISHER PUMPS. See section "Calibration of the Replenishment System" in the Operator Manual.
- [2] Check that the MAIN DRIVE CHAIN is lubricated.
  - If the DRIVE CHAIN is dry, apply lubricant to the DRIVE CHAIN. Use NLG1-No. 2 Lithium Ball and Roller Bearing Grease TL-2324.
  - If the DRIVE CHAIN is rusty, remove it and install a new one.
  - Wipe the ENTRANCE SLOT of the 5600 CIRCUIT BOARD ASSEMBLY with a damp cloth.

## Cleaning Rollers, Racks, Crossovers, and Tanks

### WARNING

Mix the *Kodak* System Cleaner as directed. Wear rubber gloves, safety glasses, and protective clothing.

### CAUTION

**Do not** place the RACKS or CROSSOVER ASSEMBLIES in *Kodak* System Cleaner.

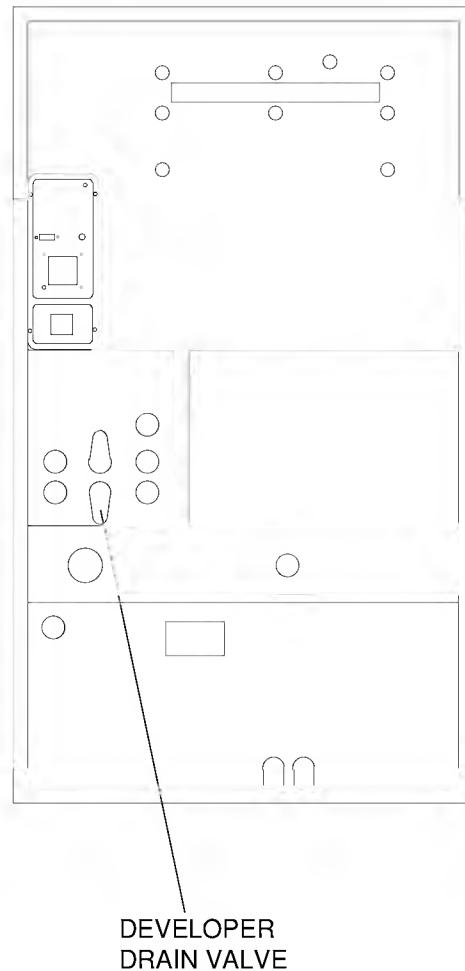
- [1] Once every 3 months, or as experience indicates, clean the DEVELOPER RACK ROLLERS and DEVELOPER TANK using *Kodak* Developer System Cleaner and a synthetic sponge. To access the inner ROLLERS on the RACK, you must remove all of the outer ROLLERS except for the bottom one. To remove the outer ROLLERS, you must first remove the STUDS from the drive side of the RACK.
- [2] Clean the FIXER RACK and FIXER TANK with *Kodak* Fixer/Wash System Cleaner.
- [3] Clean the WASH RACK with *Kodak* Fixer/Wash System Cleaner or a mild solution of chlorine bleach if biological growth exists. Use 2 fluid ounces (60 mL) of bleach for every 1 gallon (3.8 L) of water.

### CAUTION

To prevent chemical contamination, rinse ROLLERS thoroughly with warm water to remove all the System Cleaner.

- [4] Rinse all ROLLERS and RACKS thoroughly with warm water to remove all of the System Cleaner.
- [5] Remove, clean, and install the LEVEL SENSING PROBES.

- [6] Open all the DRAIN VALVES on the FEED END of the processor.
- [7] Using a HOSE, thoroughly rinse the inside of the processor TANKS with water.
- [8] Close all the DRAIN VALVES.
- [9] Install all the RACKS.
- [10] Fill the REPLENISHMENT TANKS with clean water.
- [11] Energize the processor by moving the MAIN CIRCUIT BREAKER, CB1, to the "I" position.
- [12] Using the DISPLAY PANEL, select "Tank Fill." For more instructions about selecting menu options on the control panel, see the Operator Manual. The tanks will fill automatically.
- [13] Allow the recirculation and transport cycles to complete their cycles.
- [14] Open all the DRAIN VALVES and drain the TANKS.
- [15] Repeat the previous 3 steps to be sure that all the System Cleaner is removed.
- [16] Deenergize the processor by moving the MAIN CIRCUIT BREAKER, CB1, to the "O" position.
- [17] Clean any debris from the DRYER AIR TUBES and ROLLERS by rinsing them with warm water.



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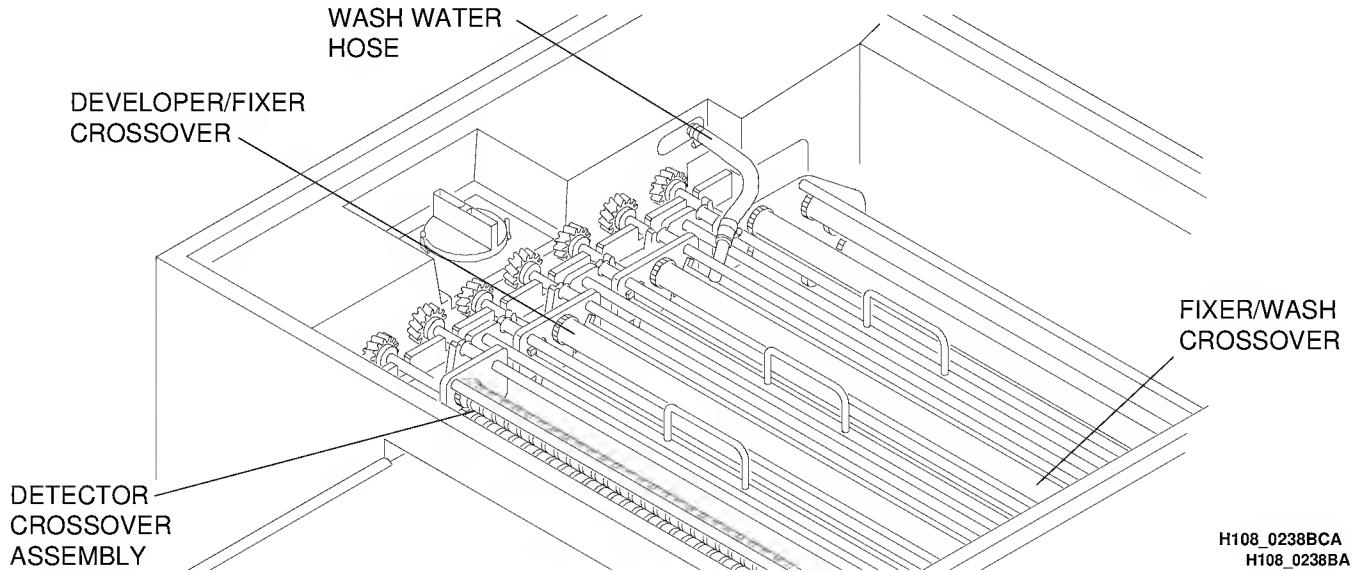
Figure 7-3 Opening the Developer Drain Valve

## Removing and Cleaning the Developer Heat Exchanger Cover

### IMPORTANT

For this procedure the processor must be deenergized, and the TOP COVER must be removed from the processor. See pages 1-3 through 1-7 for instructions, if necessary. In addition, the water supply to the processor must be shut off for this procedure.

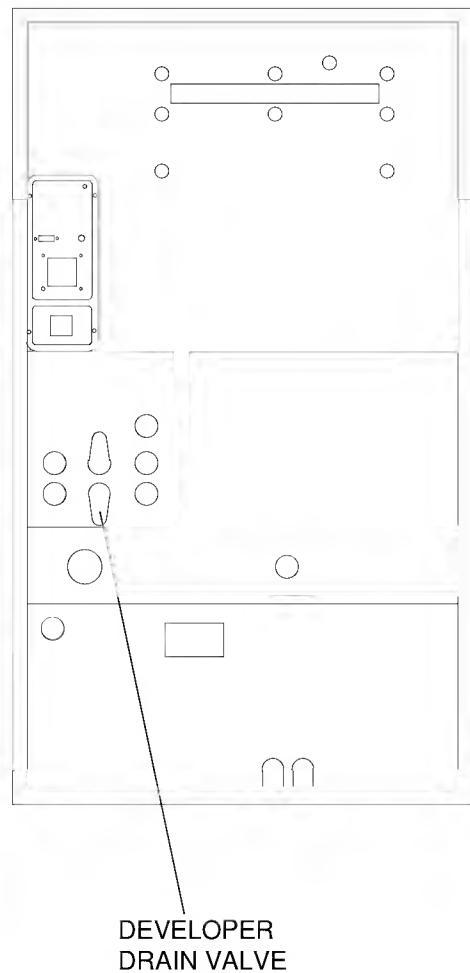
- [1] Remove the DETECTOR CROSSOVER ASSEMBLY and the DEVELOPER/FIXER CROSSOVER.



**Figure 7-4 Removing Crossovers**

- [2] Remove the DEVELOPER RACK. Use the RACK DRIP TRAY to prevent contamination of the other solutions.

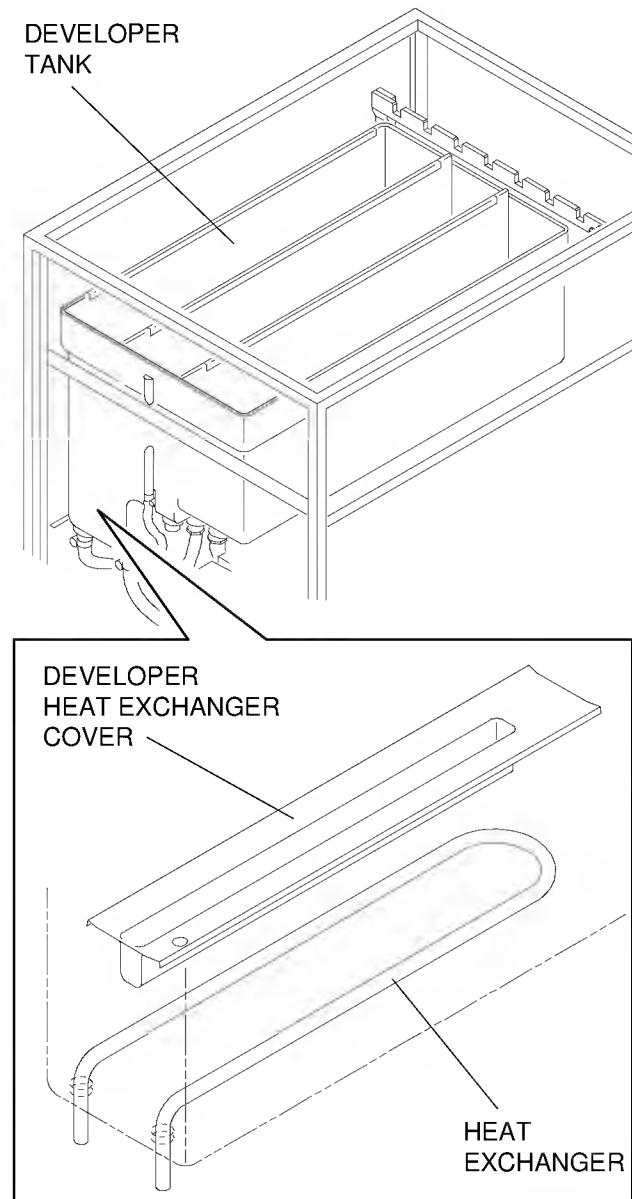
- [3] Drain the DEVELOPER TANK by opening the DEVELOPER DRAIN VALVE on the FEED END of the processor.



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**Figure 7-5 Opening the Developer Drain Valve**

- [4] Remove the DEVELOPER HEAT EXCHANGER COVER from the bottom of the DEVELOPER TANK.
- [5] Wash the DEVELOPER HEAT EXCHANGER COVER with developer system cleaner.
- [6] Rinse the DEVELOPER HEAT EXCHANGER COVER thoroughly with water to remove all of the developer system cleaner.
- [7] Install the DEVELOPER HEAT EXCHANGER COVER into the bottom of the DEVELOPER TANK.
- [8] Install all parts removed in previous steps.



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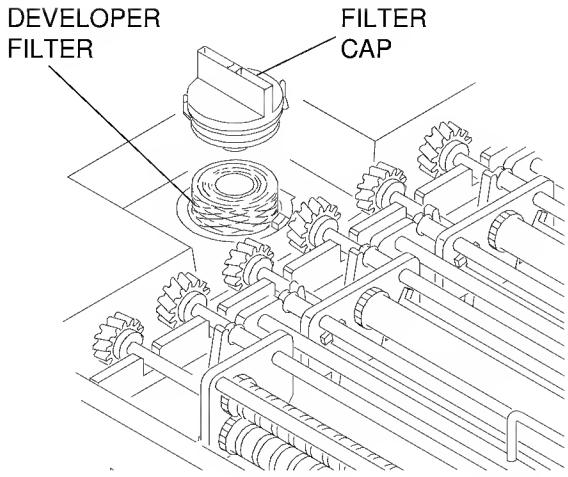
**Figure 7-6 Removing the Developer Heat Exchanger Cover**

## Removing the Developer Filter

### IMPORTANT

For this procedure the processor must be deenergized. See page 1-7. In addition, the TOP COVER must be removed from the processor. See pages 1-3 through 1-5 for instructions, if necessary.

- [1] Remove the FILTER CAP.
- [2] Remove and discard the DEVELOPER FILTER.
- [3] Install the new DEVELOPER FILTER.
- [4] Install and tighten the FILTER CAP.
- [5] Energize the processor.
- [6] Check the FILTER CANISTER for leaks.



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**Figure 7-7 Removing the Developer Cap and Filter**

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